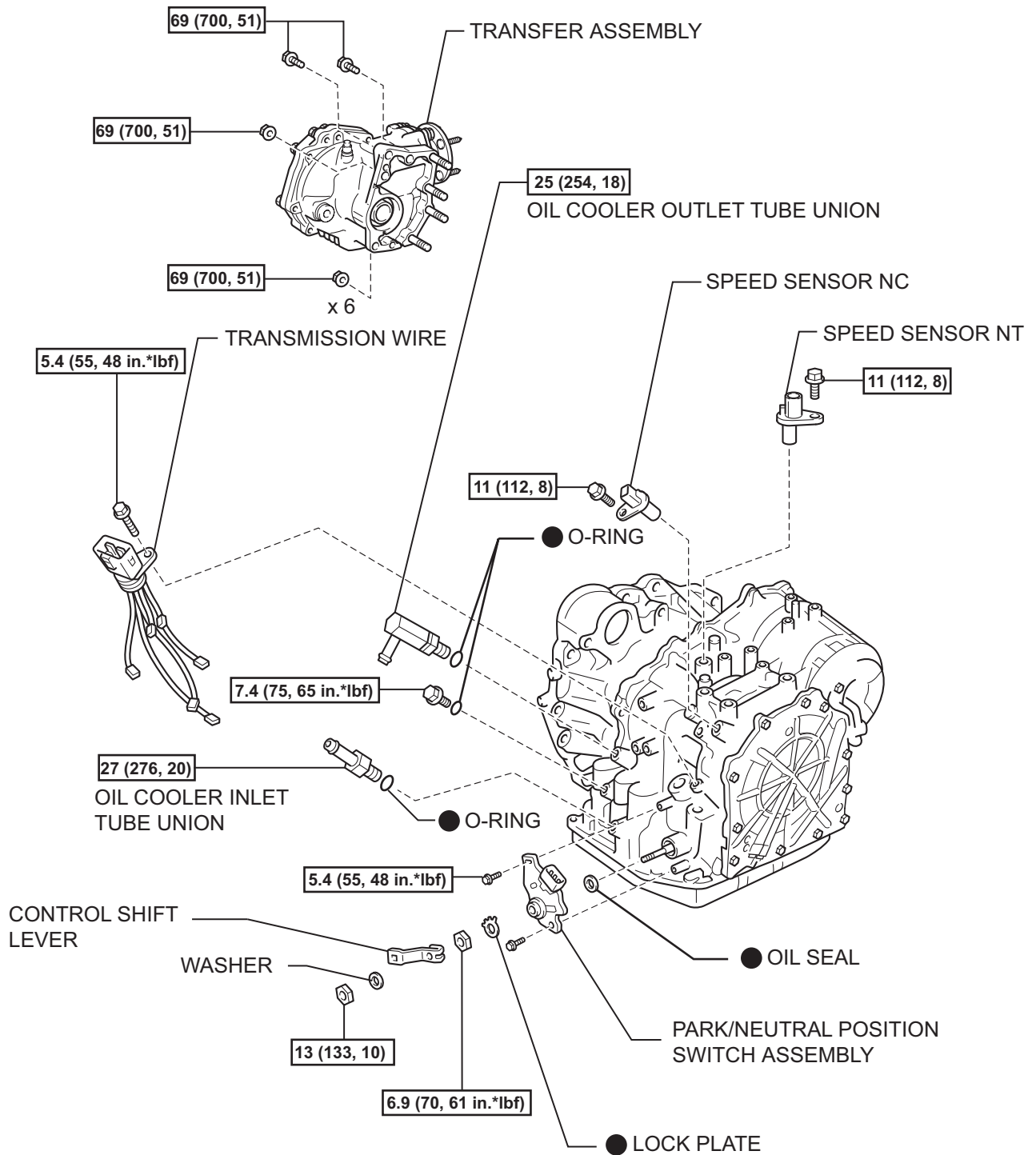


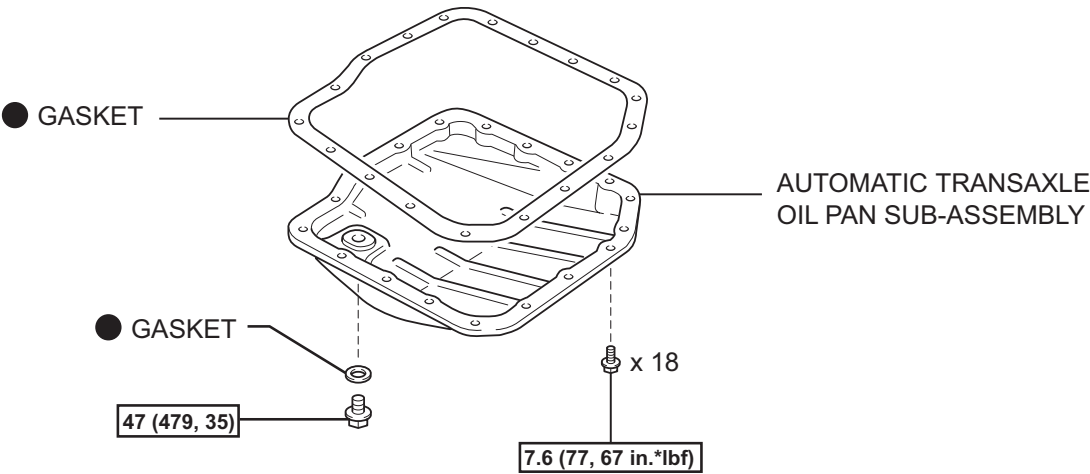
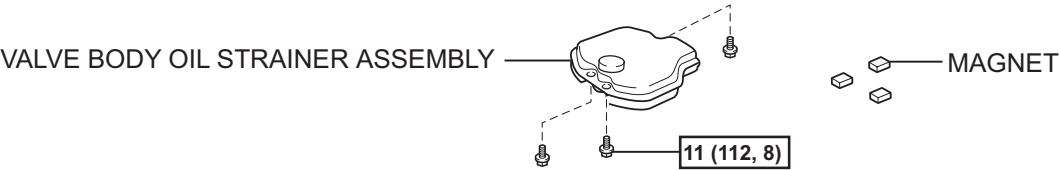
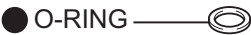
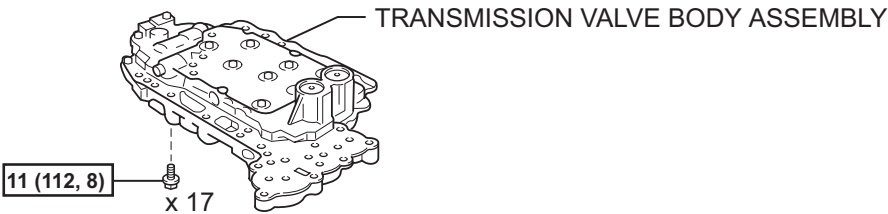
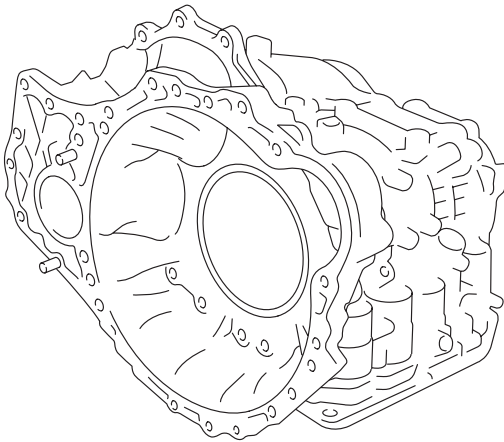
AUTOMATIC TRANSAXLE UNIT

COMPONENTS



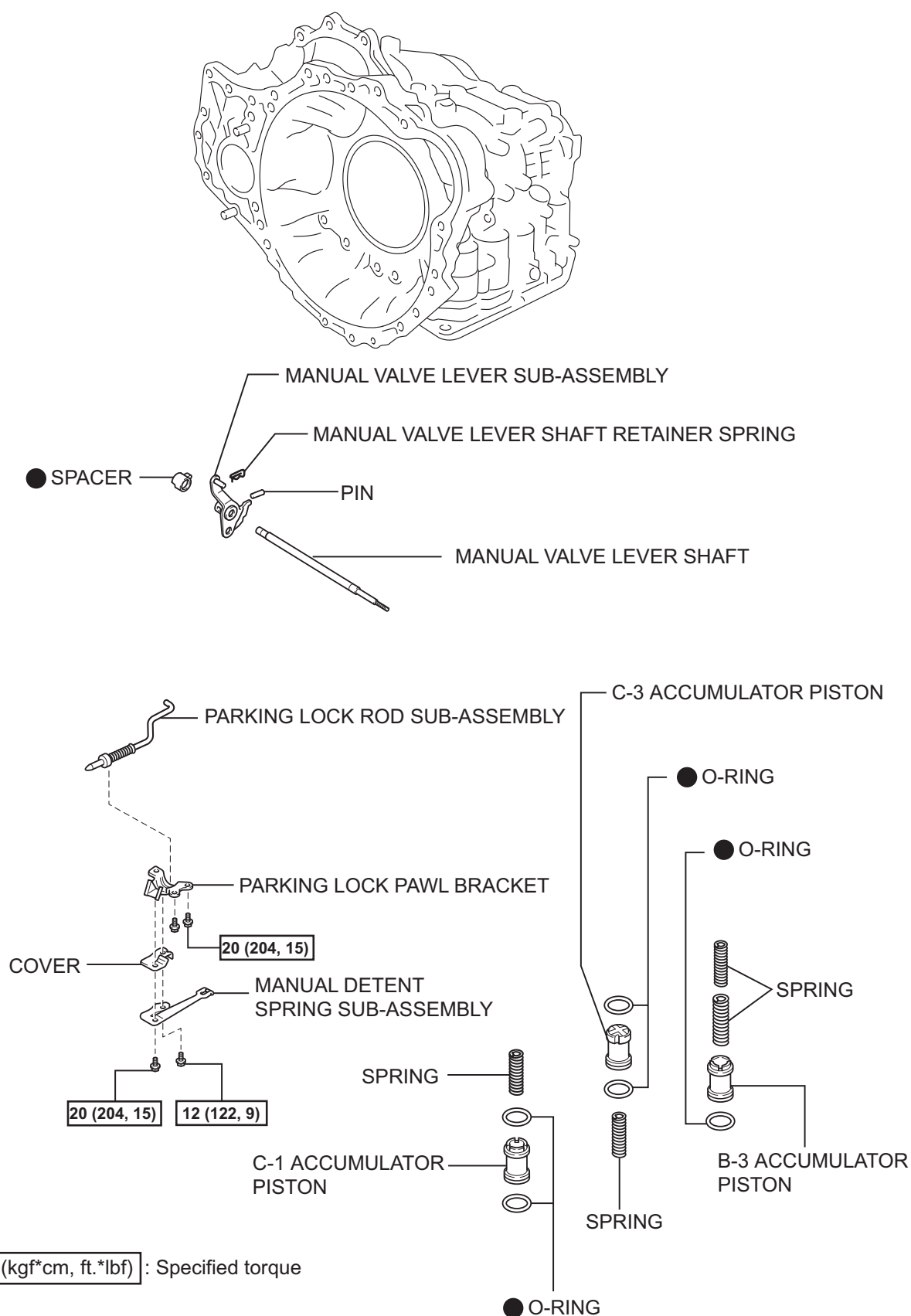
N*m (kgf*cm, ft.*lbf) : Specified torque

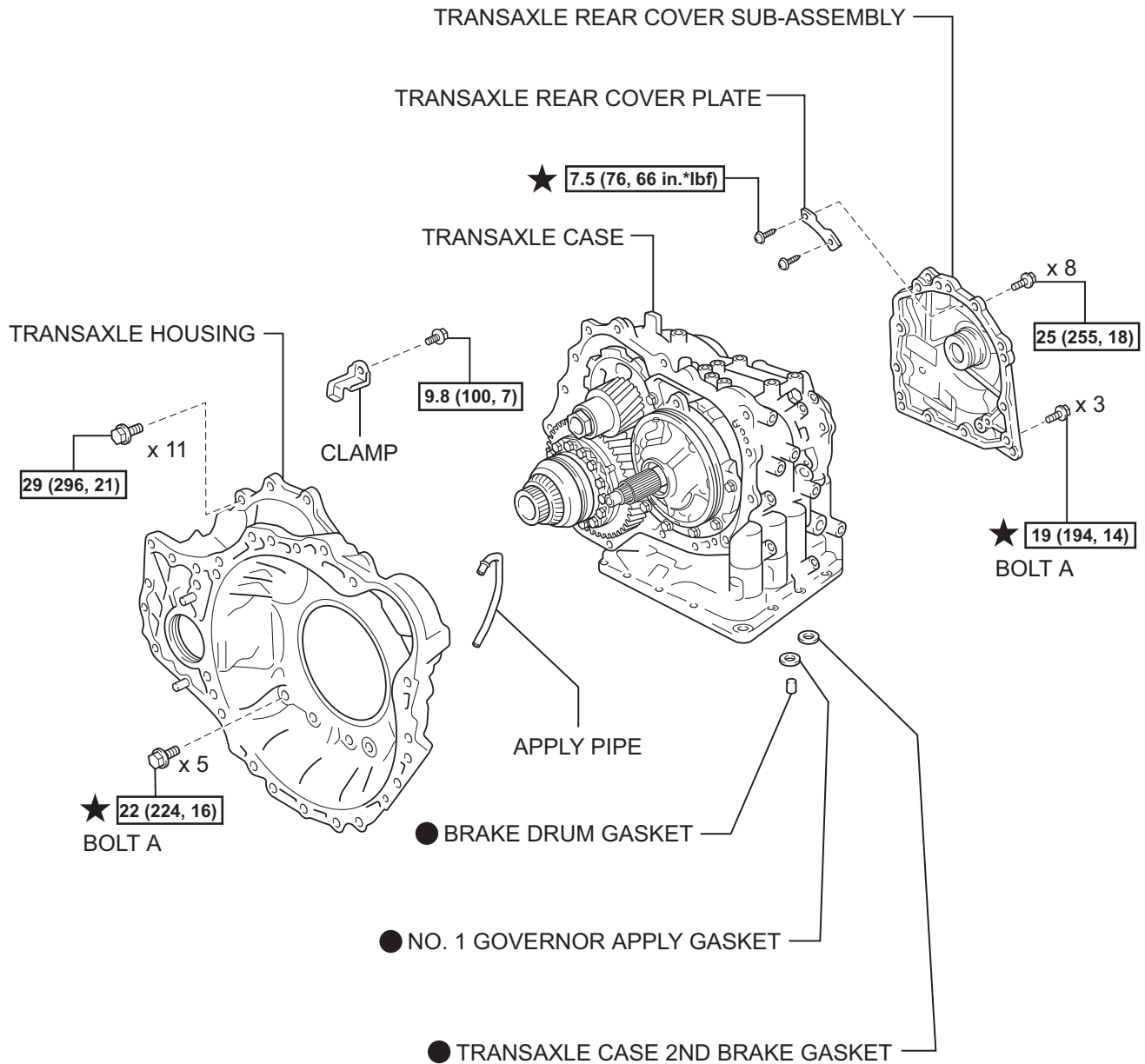
● Non-reusable part



N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

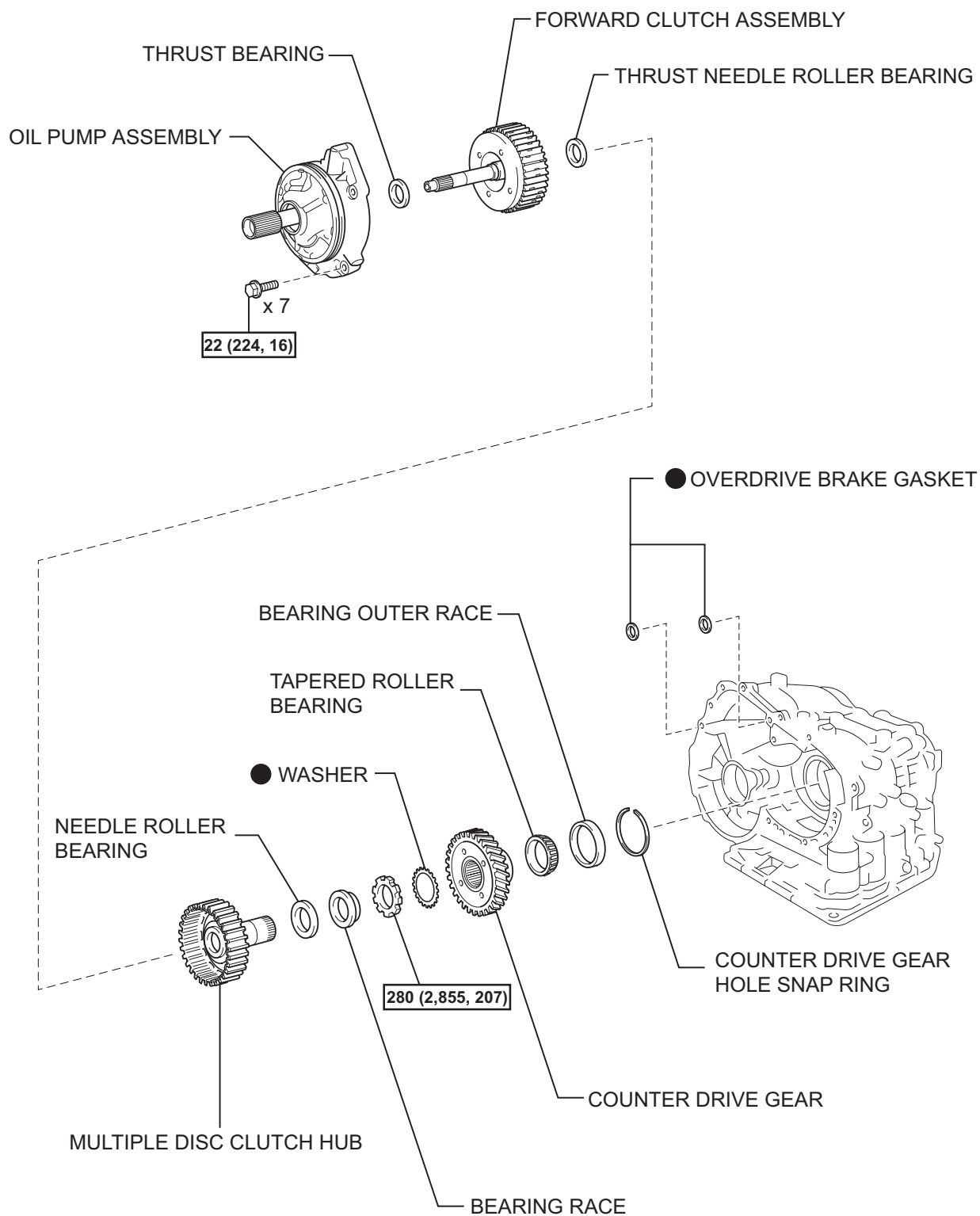




N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

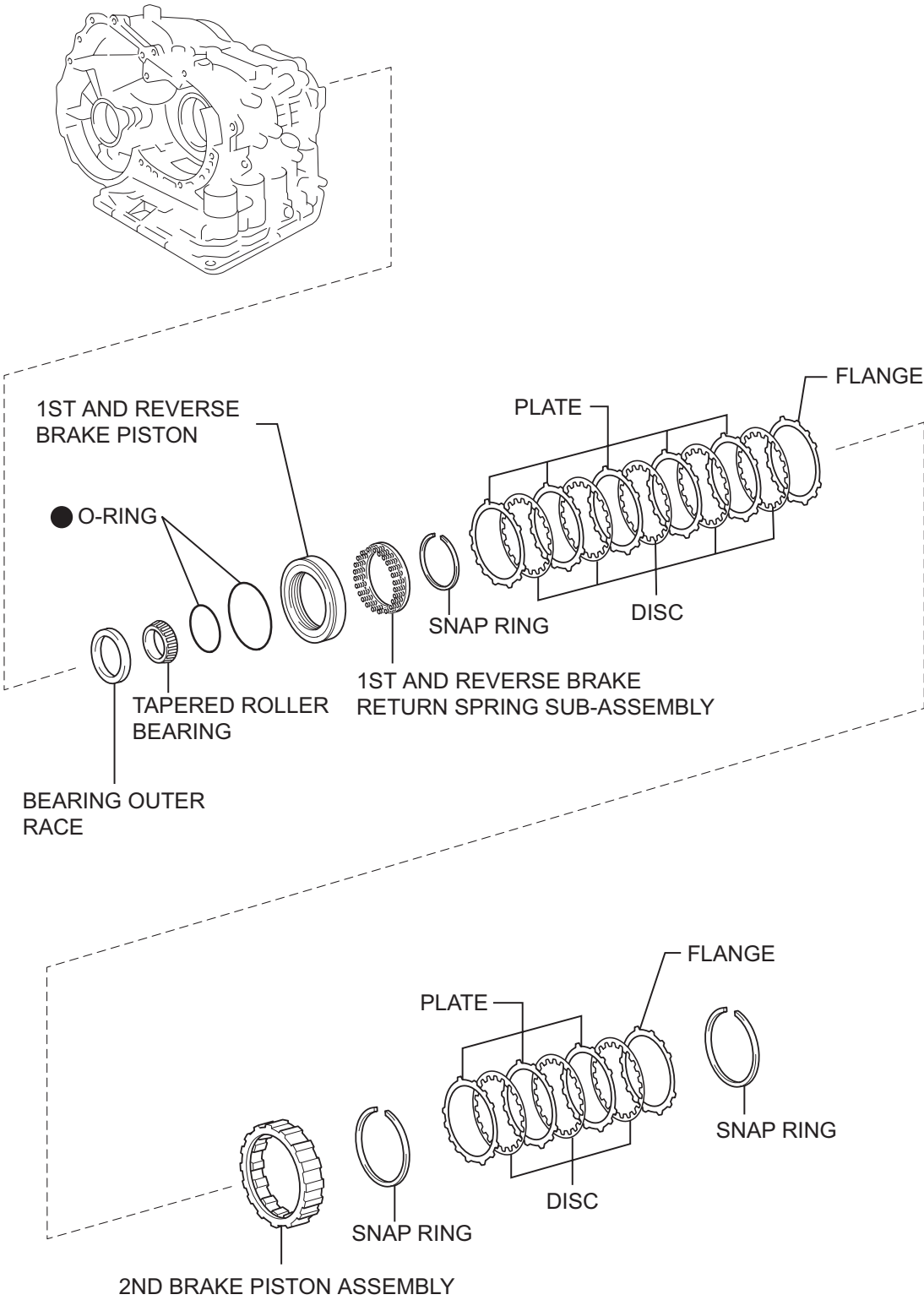
★ Precoated part



N*m (kgf*cm, ft.*lbf) : Specified torque

● Non-reusable part

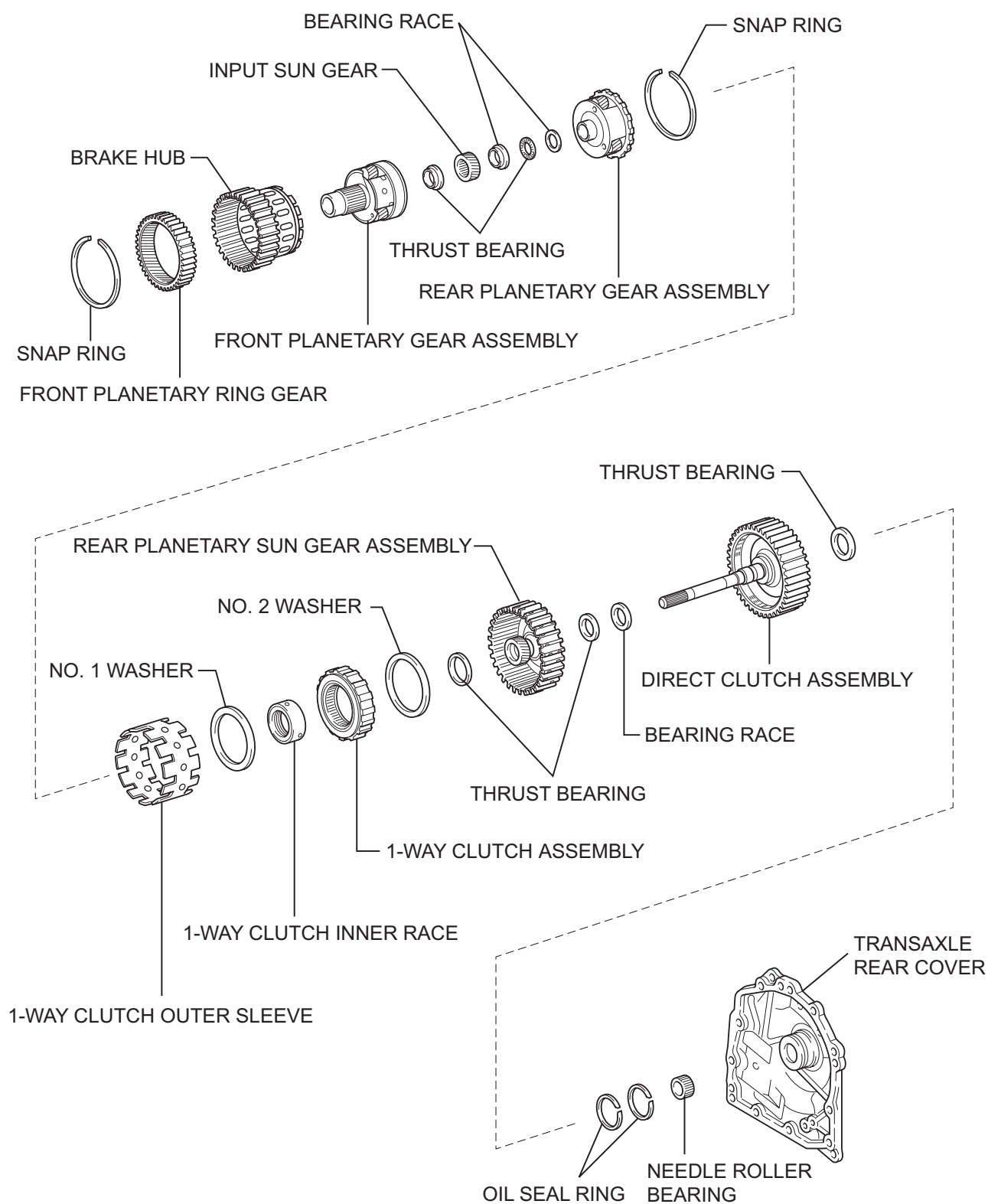
AX

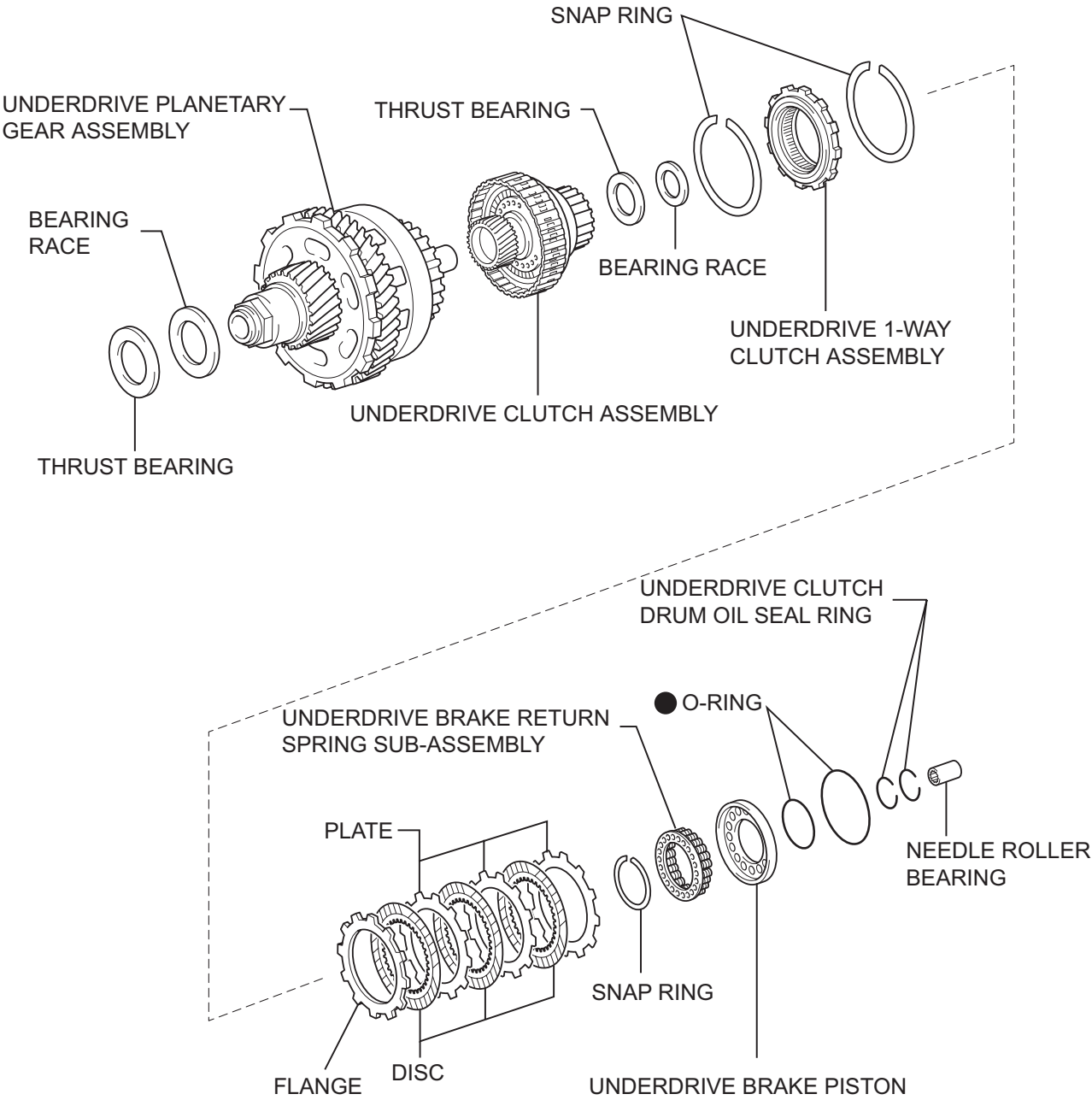


AX

● Non-reusable part

N

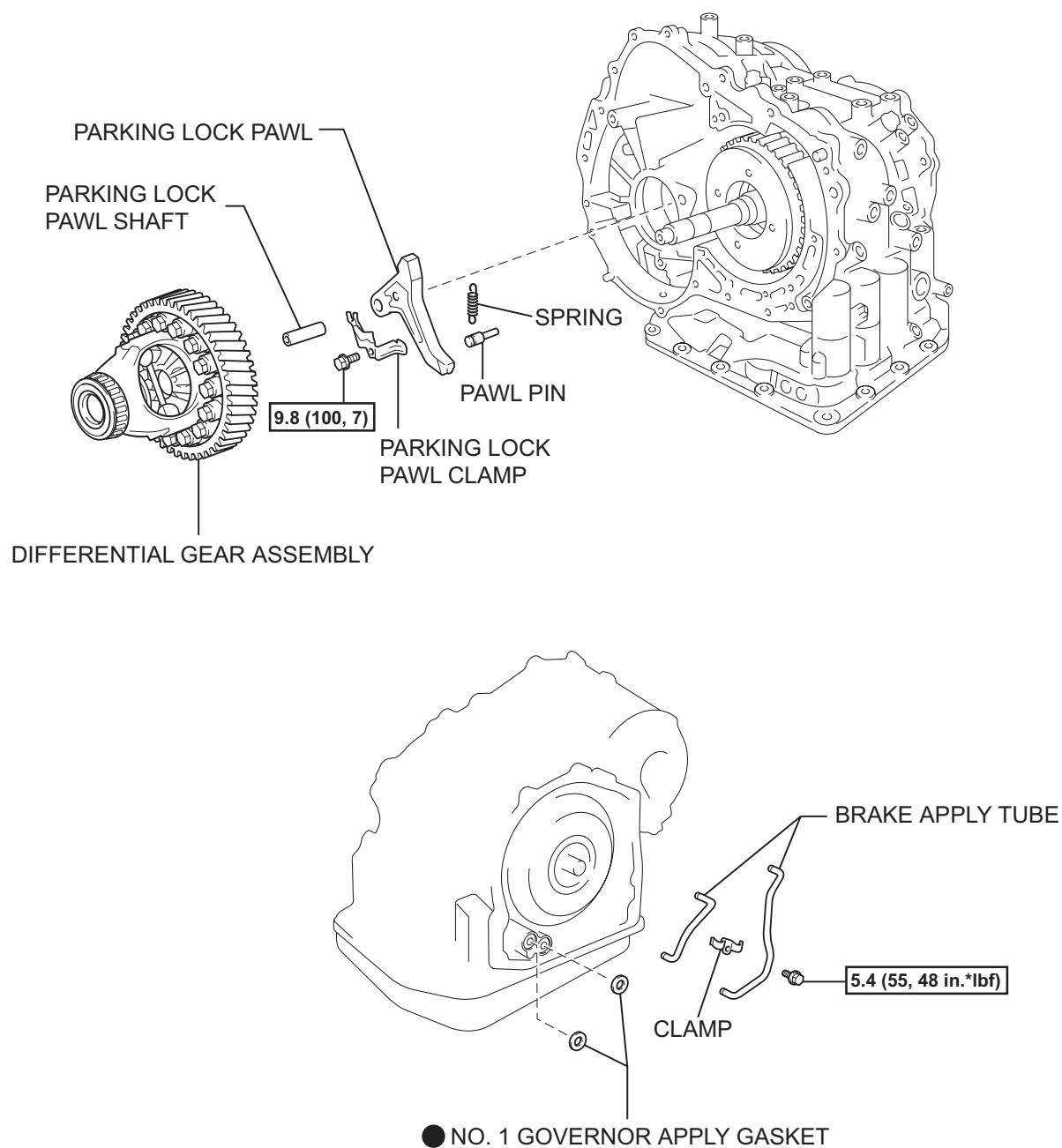




AX

● Non-reusable part

N



N*m (kgf*cm, ft.*lbf) : Specified torque

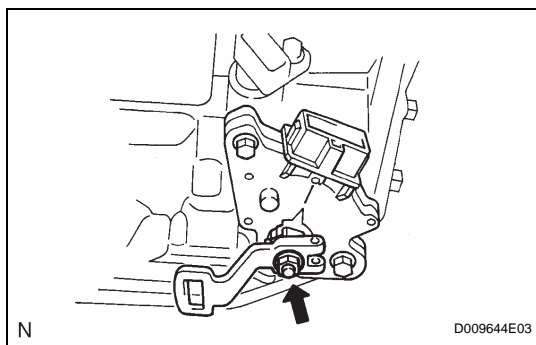
● Non-reusable part

AX

DISASSEMBLY

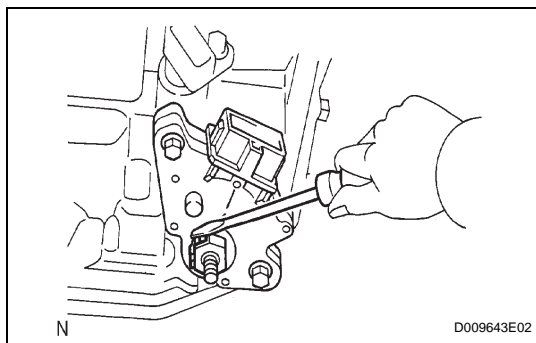
1. REMOVE PARK/NEUTRAL POSITION SWITCH ASSEMBLY

(a) Remove the nut, washer and control shaft lever.



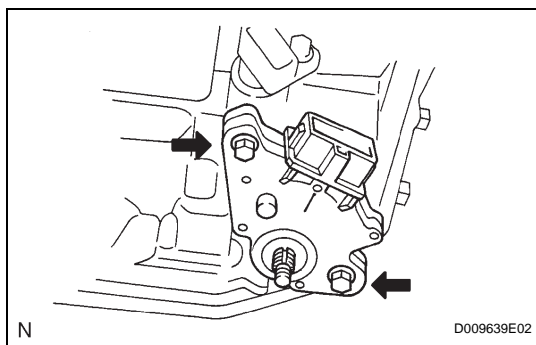
(b) Using a screwdriver, pry off the lock plate.

(c) Remove the nut and lock plate.



(d) Remove the 2 bolts and pull out the switch.

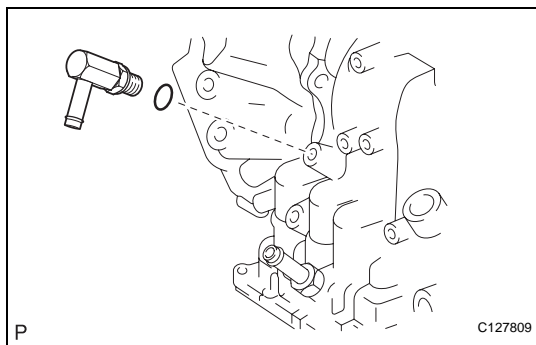
2. REMOVE BREATHER PLUG HOSE



3. REMOVE OIL COOLER OUTLET TUBE UNION

(a) Remove the union.

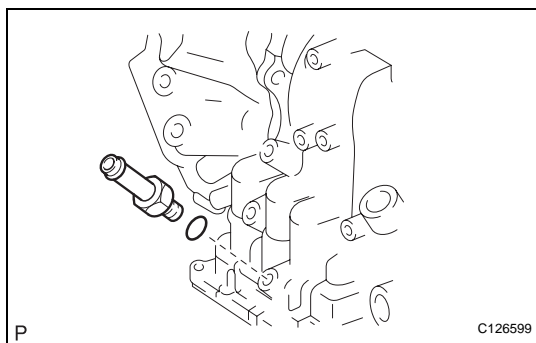
(b) Remove the O-ring from the union.

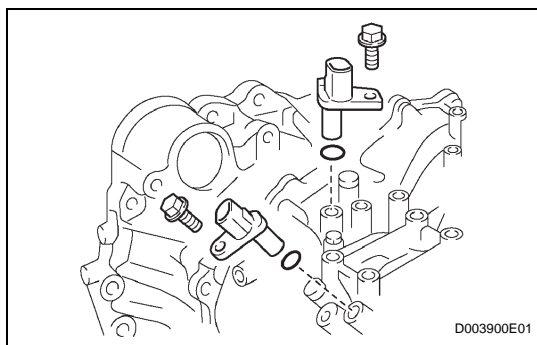


4. REMOVE OIL COOLER INLET TUBE UNION

(a) Remove the union.

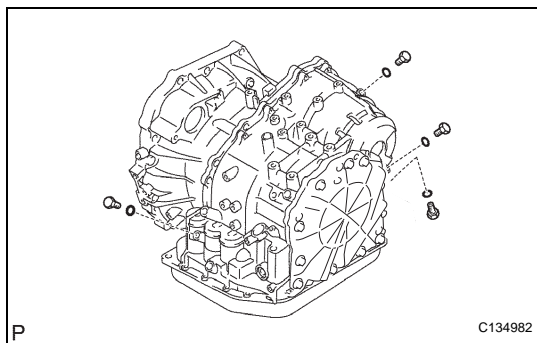
(b) Remove the O-ring from the union.





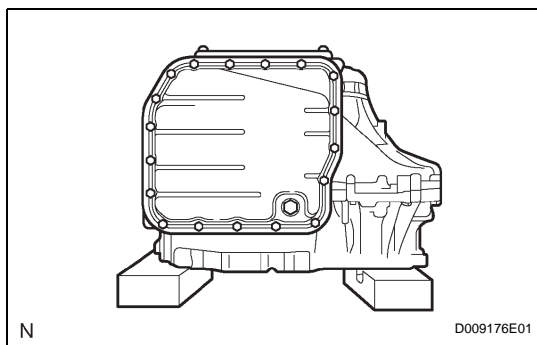
5. REMOVE SPEED SENSOR

- Remove the 2 bolts and 2 transmission revolution sensors from the transaxle.
- Remove the 2 O-rings from the sensors.

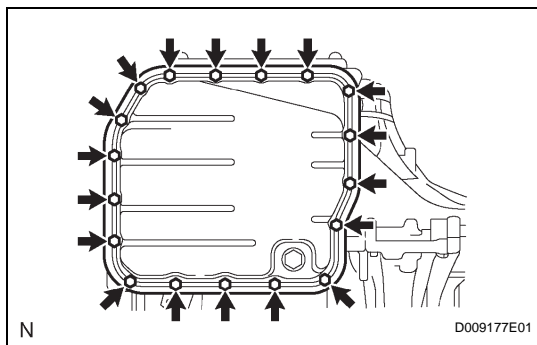


6. REMOVE NO. 1 TRANSAXLE CASE PLUG

- Remove the 4 plugs from the transaxle.
- Remove the 4 O-rings from the 4 plugs.



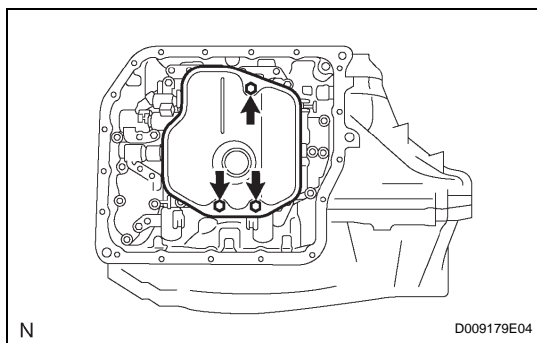
7. PLACE TRANSAXLE ON WOODEN BLOCKS



8. REMOVE AUTOMATIC TRANSAXLE OIL PAN SUB-ASSEMBLY

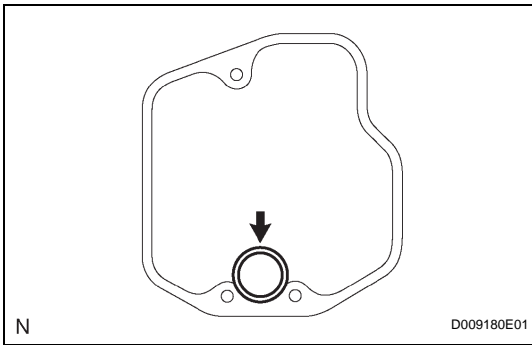
- Remove the 18 bolts.
- Remove the oil pan and 3 magnets.
- Remove the gasket from the oil pan.

9. INSPECT AUTOMATIC TRANSAXLE OIL PAN SUB-ASSEMBLY (See page [AX-184](#))

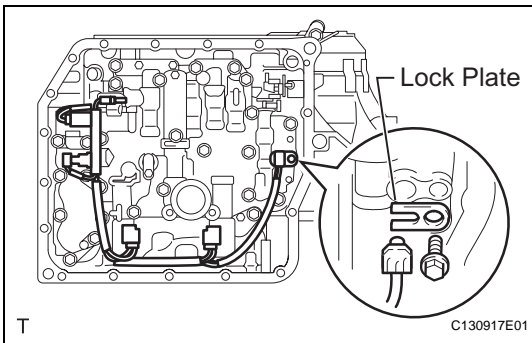


10. REMOVE VALVE BODY OIL STRAINER ASSEMBLY

- Remove the 3 bolts and oil strainer.

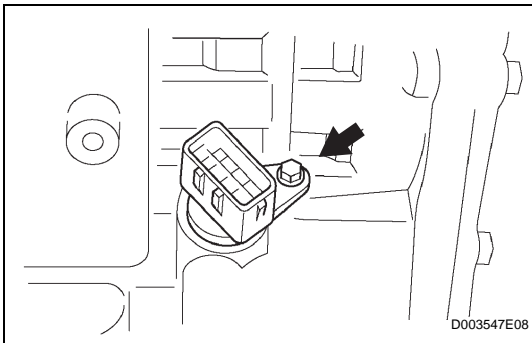


(b) Remove the O-ring from the oil strainer.

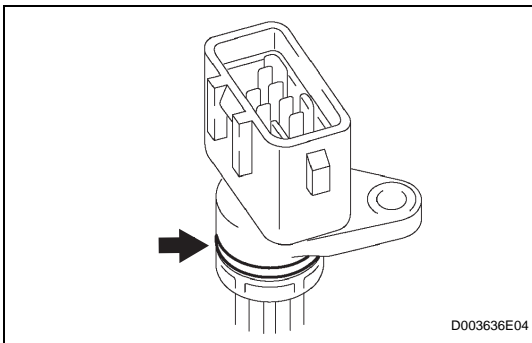


11. REMOVE TRANSMISSION WIRE

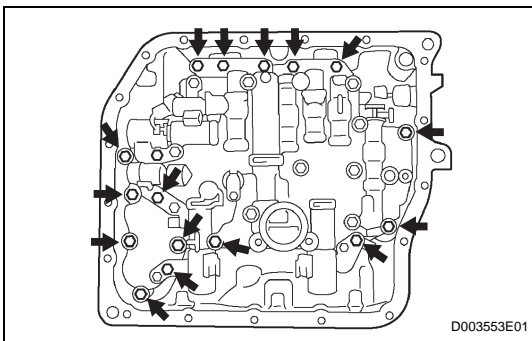
- (a) Disconnect the 5 shift solenoid valve connectors.
- (b) Remove the bolt, lock plate and ATF temperature sensor.



(c) Remove the bolt and transaxle wire.

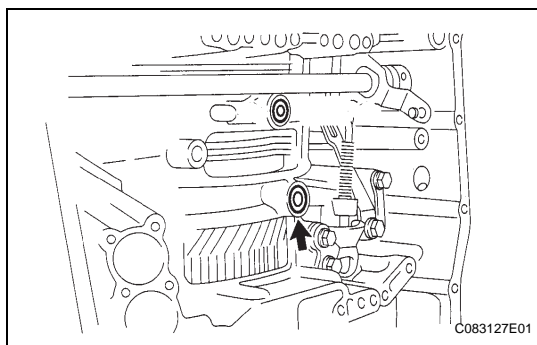


(d) Remove the O-ring from the transaxle wire.

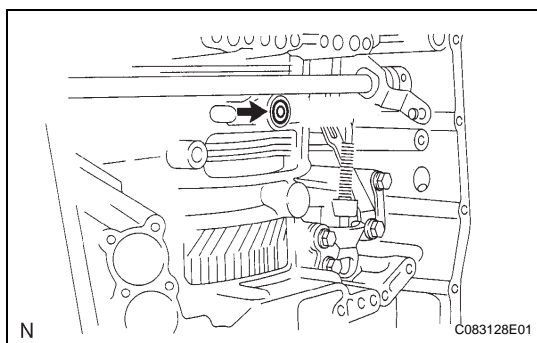


12. REMOVE TRANSMISSION VALVE BODY ASSEMBLY

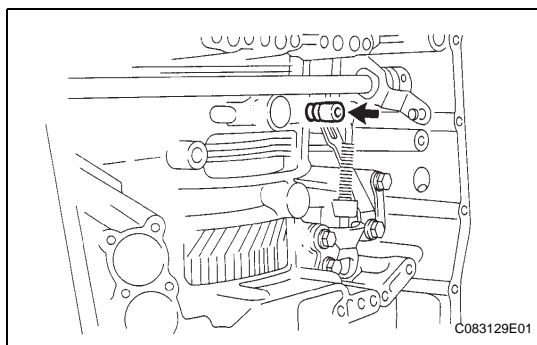
- (a) Support the valve body and remove the 17 bolts and valve body.

**13. REMOVE NO. 1 GOVERNOR APPLY GASKET**

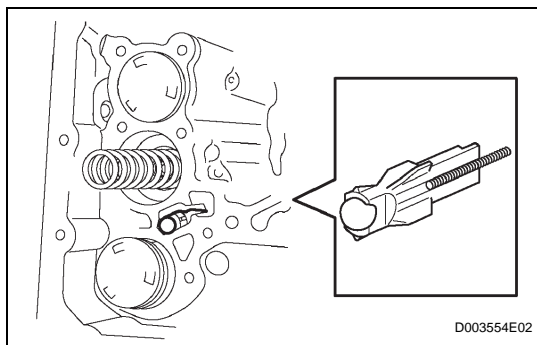
- (a) Remove the governor apply gasket from the transaxle case.

**14. REMOVE TRANSAXLE CASE 2ND BRAKE GASKET**

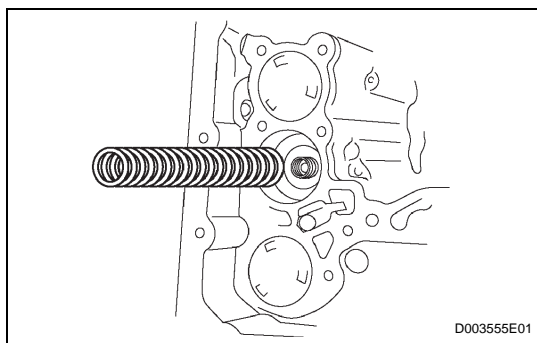
- (a) Remove the 2nd brake gasket from the transaxle.

**15. REMOVE BRAKE DRUM GASKET**

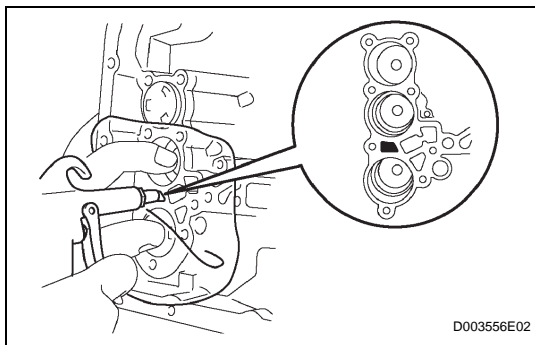
- (a) Remove the brake drum gasket from the transaxle.

**16. REMOVE CHECK BALL BODY**

- (a) Remove the check ball and spring from the transaxle.

**17. REMOVE C-3 ACCUMULATOR PISTON**

- (a) Remove the spring from the C-3 accumulator piston.

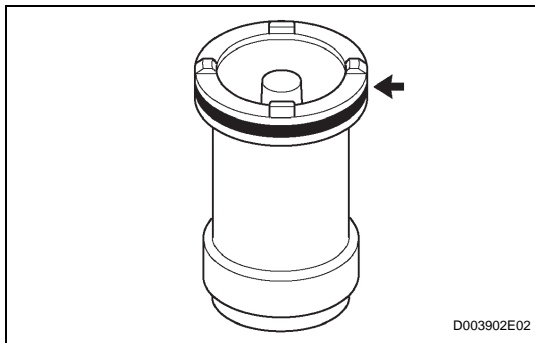


- (b) Apply compressed air (392 kPa, 4.0 kgf/cm², 57 psi) to the oil hole and remove the C-3 accumulator piston.

NOTICE:

- Applying compressed air may cause the piston to jump out. When removing the piston, hold it with your hand using a waste cloth.
- Make sure not to spatter ATF when applying compressed air.

- (c) Remove the O-ring from the C-3 accumulator piston.

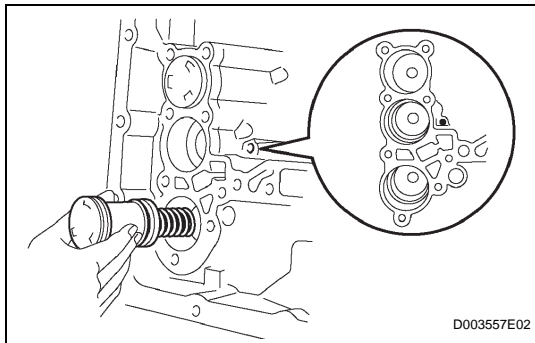


18. REMOVE C-1 ACCUMULATOR PISTON

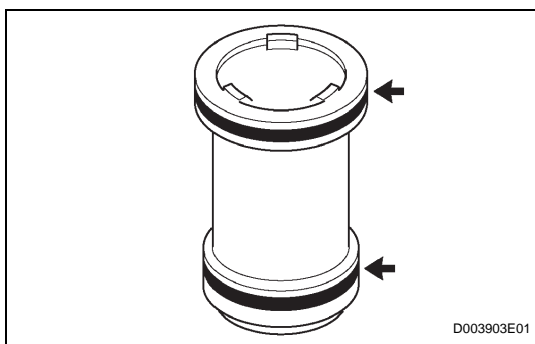
- (a) Apply compressed air (392 kPa, 4.0 kgf/cm², 57 psi) to the oil hole and remove the C-1 accumulator piston and spring.

NOTICE:

- Applying compressed air may cause the piston to jump out. When removing the piston, hold it with your hand using a waste cloth.
- Make sure not to spatter ATF when applying compressed air.



- (b) Remove the 2 O-rings from the C-1 accumulator piston.

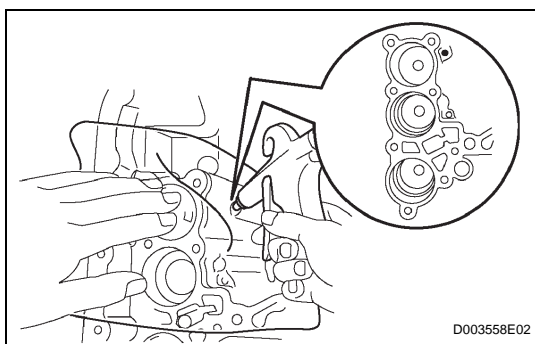


19. REMOVE B-3 ACCUMULATOR PISTON

- (a) Apply compressed air (392 kPa, 4.0 kgf/cm², 57 psi) to the oil hole and remove the B-3 accumulator piston and 2 springs.

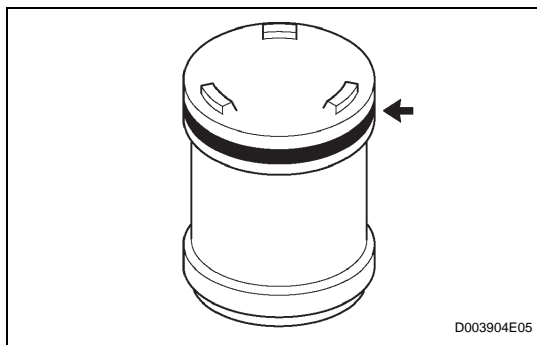
NOTICE:

- Applying compressed air may cause the piston to jump out. When removing the piston, hold it with your hand using a waste cloth.



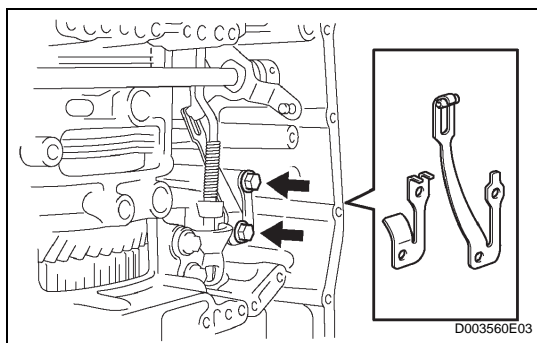
- **Make sure not to spatter ATF when applying compressed air.**

- (b) Remove the O-ring from the B-3 accumulator piston.



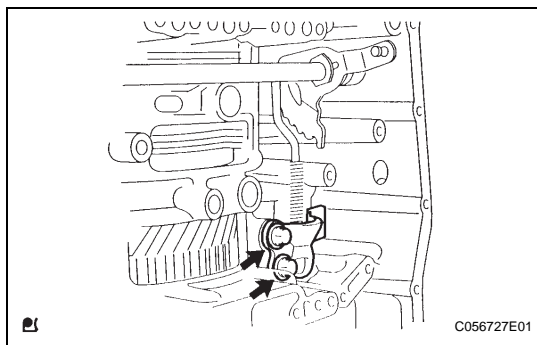
20. REMOVE MANUAL DETENT SPRING SUB-ASSEMBLY

- (a) Remove the 2 bolts, manual detent spring and cover.



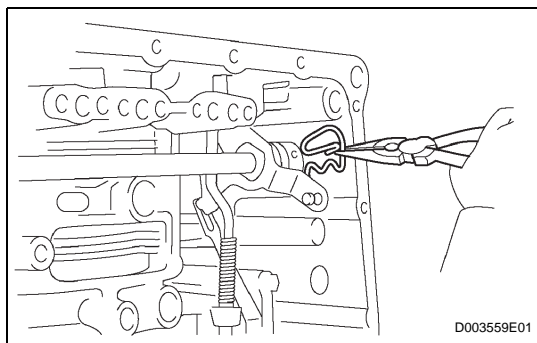
21. REMOVE PARKING LOCK PAWL BRACKET

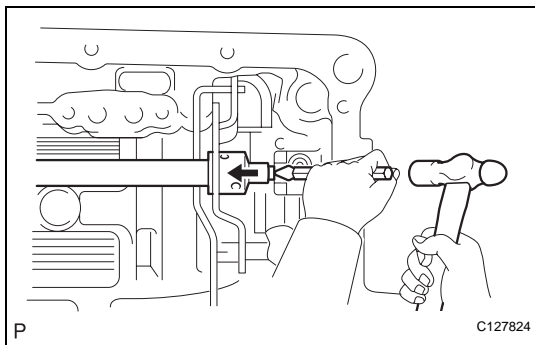
- (a) Remove the 2 bolts and parking lock pawl bracket.



22. REMOVE MANUAL VALVE LEVER SHAFT RETAINER SPRING

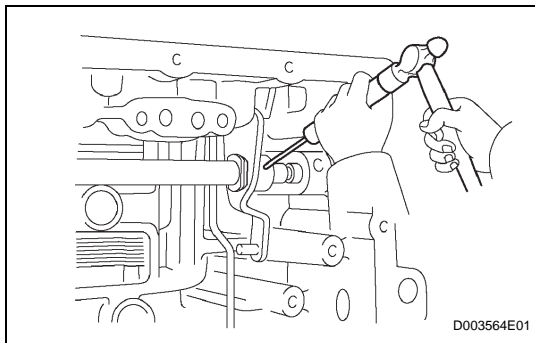
- (a) Using needle-nose pliers, remove the retainer spring.



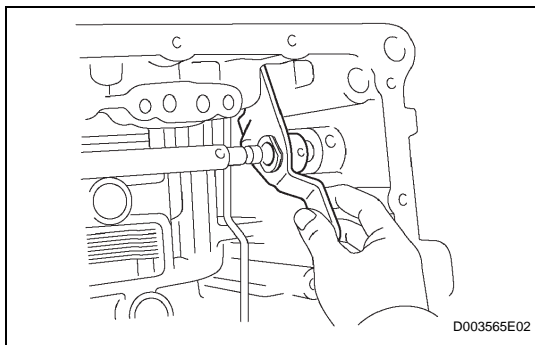


23. REMOVE MANUAL VALVE LEVER SUB-ASSEMBLY

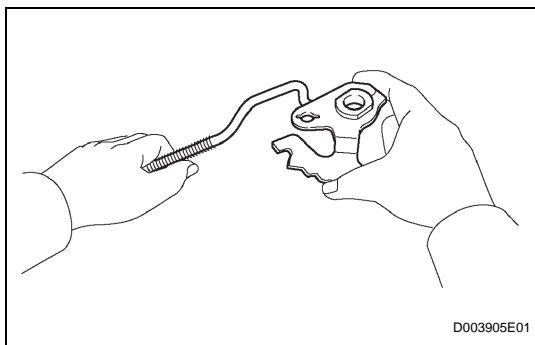
- (a) Using a chisel and hammer, unstake and remove the spacer.



- (b) Using a pin punch and hammer, tap out the pin.
HINT:
Slowly tap out the pin so that it will not fall into the transaxle.

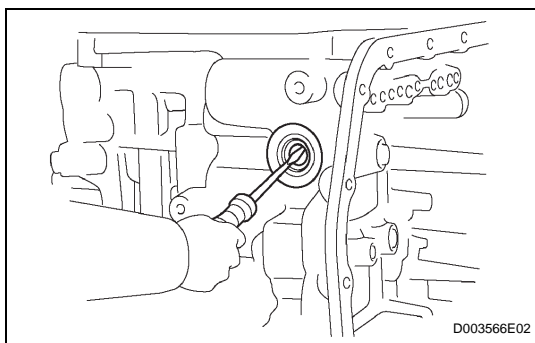


- (c) Remove the manual valve lever shaft and manual valve lever.



24. REMOVE PARKING LOCK ROD SUB-ASSEMBLY

- (a) Remove the parking lock rod from the manual valve lever.



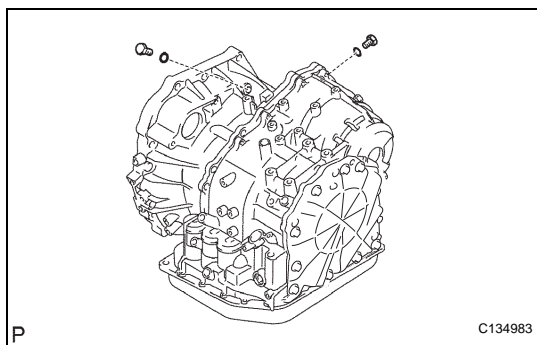
25. REMOVE MANUAL VALVE LEVER SHAFT OIL SEAL

- (a) Using a screwdriver, pry out the oil seal from the transaxle.

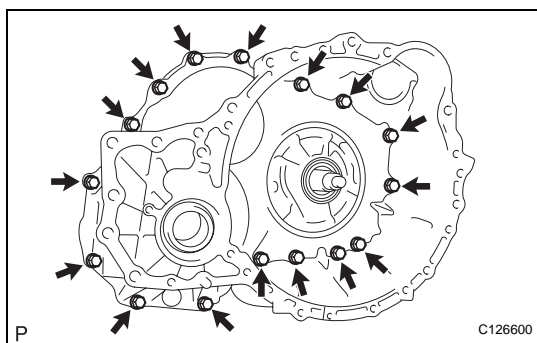
26. FIX AUTOMATIC TRANSAXLE ASSEMBLY

- (a) Fix the transaxle case with the oil pump side facing up.

27. INSPECT INPUT SHAFT END PLAY (See page [AX-184](#))

**28. REMOVE NO. 1 TRANSAXLE CASE PLUG**

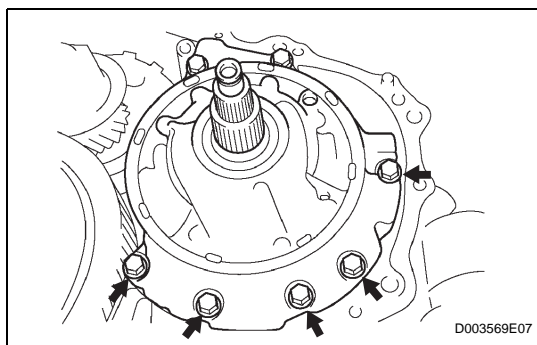
- (a) Remove the 2 plugs.
- (b) Remove the 2 O-rings from the 2 plugs.

**29. REMOVE TRANSAXLE HOUSING**

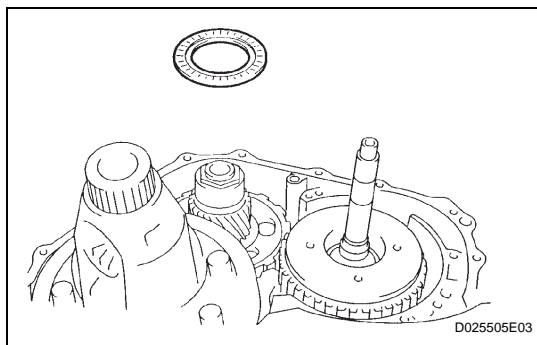
- (a) Remove the 16 bolts.
- (b) Tap on the circumference of the transaxle housing with a plastic-faced hammer to remove the transaxle housing from the transaxle case.

NOTICE:

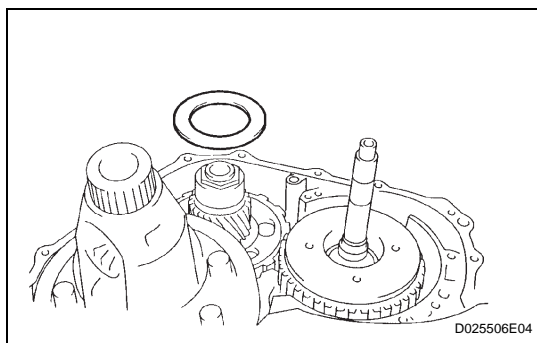
The differential may be accidentally removed when the transaxle housing is removed.

**30. REMOVE OIL PUMP ASSEMBLY**

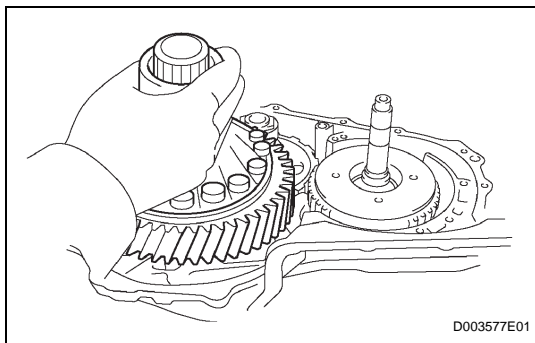
- (a) Remove the 7 bolts and oil pump from the transaxle.

**31. REMOVE THRUST NEEDLE ROLLER BEARING**

- (a) Remove thrust needle roller bearing from the underdrive planetary gear.

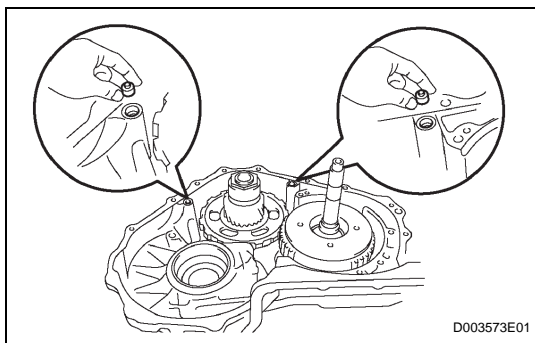
**32. REMOVE NO. 2 THRUST BEARING UNDERDRIVE RACE**

- (a) Remove the thrust bearing underdrive race from the underdrive planetary gear.



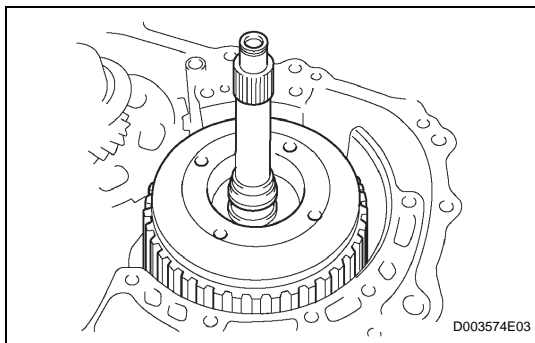
33. REMOVE DIFFERENTIAL GEAR ASSEMBLY

- (a) Remove the differential gear from the transaxle.



34. REMOVE OVERDRIVE BRAKE GASKET

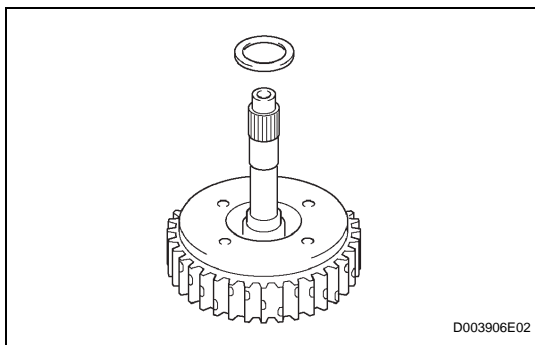
- (a) Remove the 2 overdrive brake gaskets from the transaxle.



35. REMOVE FORWARD CLUTCH ASSEMBLY

- (a) Remove the forward clutch from the transaxle.

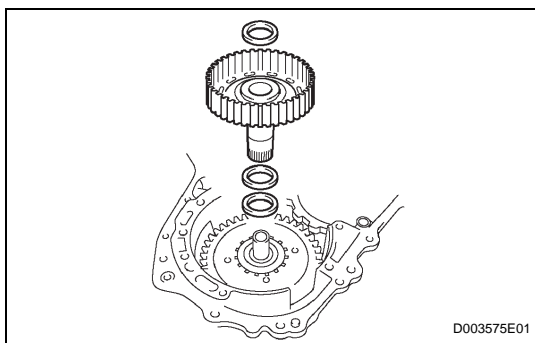
- (b) Remove the thrust bearing from the forward clutch.

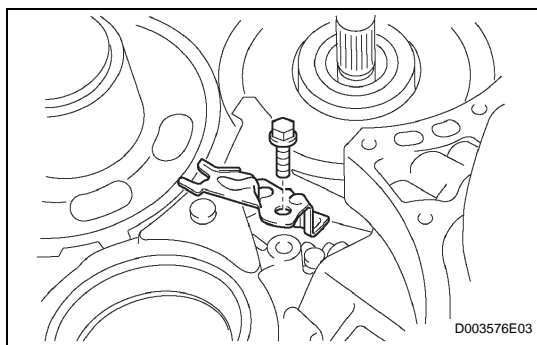


36. REMOVE MULTIPLE DISC CLUTCH HUB

- (a) Remove the thrust bearing, multiple clutch hub, needle roller bearing and bearing race from the transaxle.

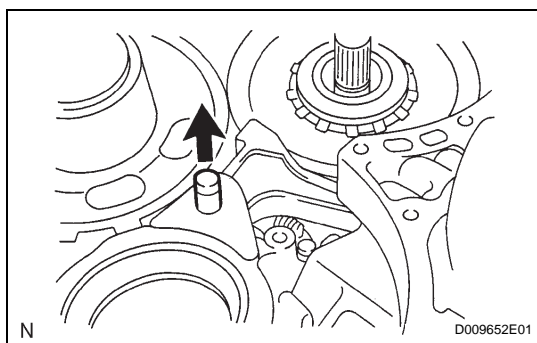
37. INSPECT MULTIPLE DISC CLUTCH HUB (See page [AX-184](#))



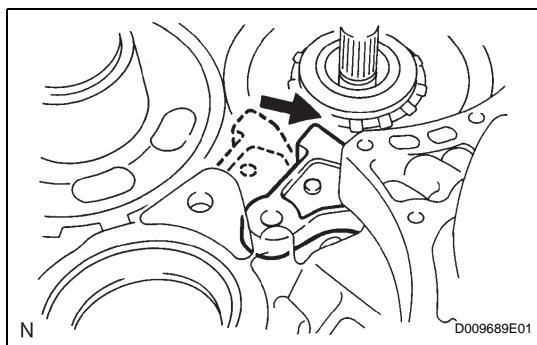


38. REMOVE UNDERDRIVE PLANETARY GEAR ASSEMBLY

- (a) Remove the bolt and parking pawl shaft clamp.



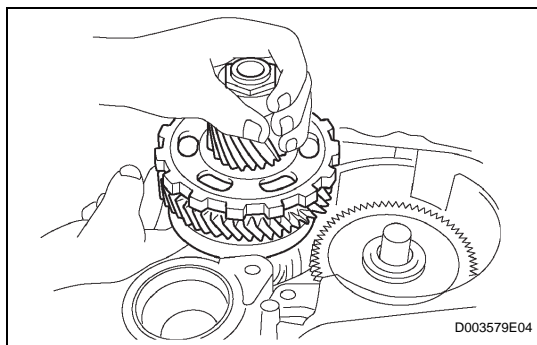
- (b) Remove the parking lock pawl shaft.



- (c) Push the parking lock pawl.

HINT:

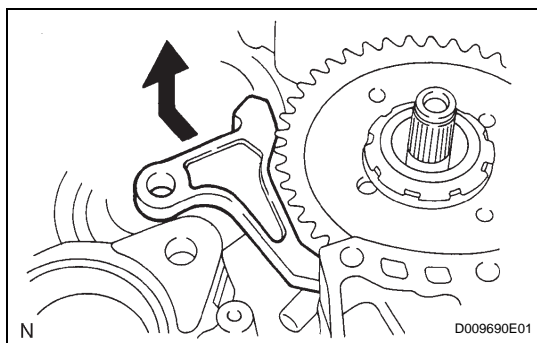
Failure to do so will cause interference when the underdrive planetary gear is removed.



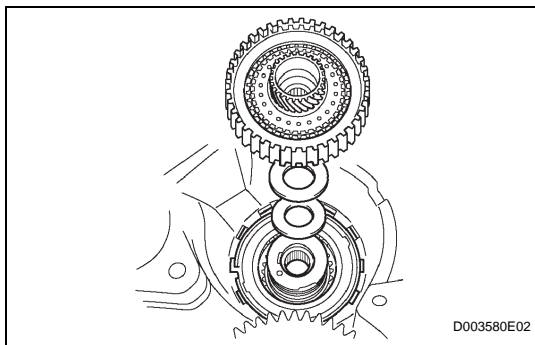
- (d) Remove the underdrive planetary gear from the transaxle.

NOTICE:

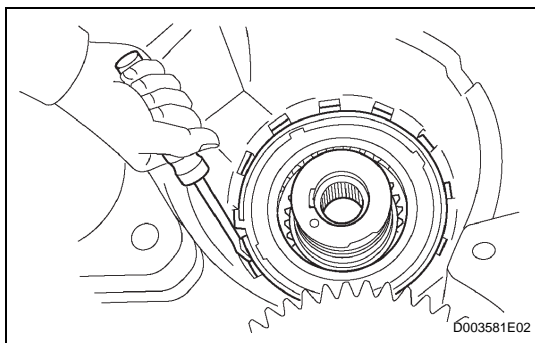
Be careful so that the underdrive planetary gear assembly will not fall out.



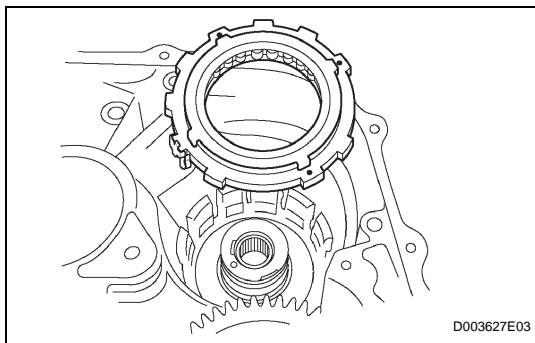
- (e) Remove the spring, pawl pin and parking lock pawl.

**39. REMOVE UNDERDRIVE CLUTCH ASSEMBLY**

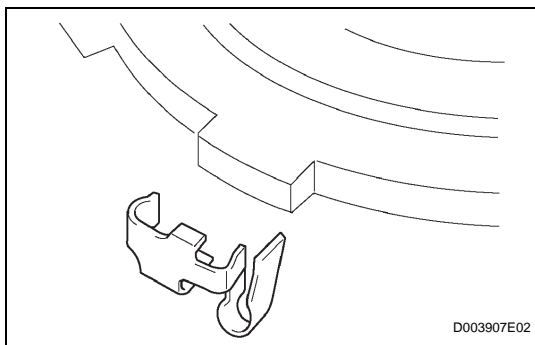
- (a) Remove the underdrive clutch, thrust bearing and bearing race from the transaxle.

**40. REMOVE UNDERDRIVE 1-WAY CLUTCH ASSEMBLY**

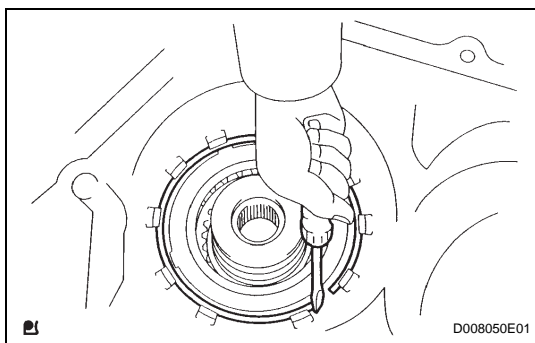
- (a) Using a screwdriver, pry out the snap ring from the transaxle.



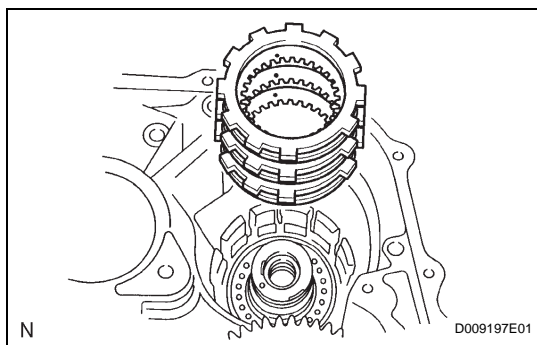
- (b) Remove the 1-way clutch from the transaxle.



- (c) Remove the outer race retainer from the 1-way clutch.

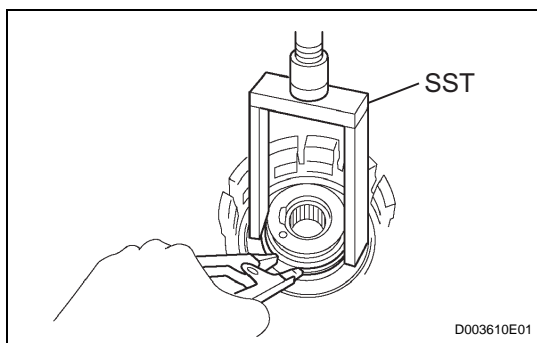
**41. REMOVE NO. 2 UNDERDRIVE CLUTCH DISC**

- (a) Using a screwdriver, pry out the snap ring.



- (b) Remove the flange, 3 discs and 3 plates from the transaxle.

42. INSPECT NO. 2 UNDERDRIVE CLUTCH DISC (See page [AX-185](#))

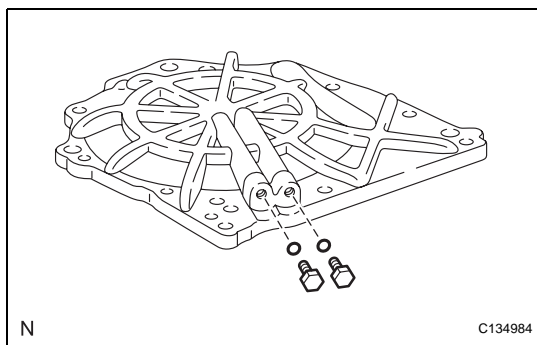


43. REMOVE UNDERDRIVE BRAKE RETURN SPRING SUB-ASSEMBLY

- (a) Using SST, a snap ring expander and press, remove the snap ring and piston return spring.

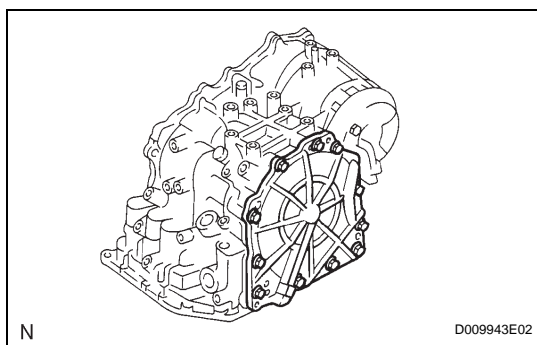
SST 09387-00020

44. INSPECT UNDERDRIVE BRAKE RETURN SPRING SUB-ASSEMBLY (See page [AX-185](#))



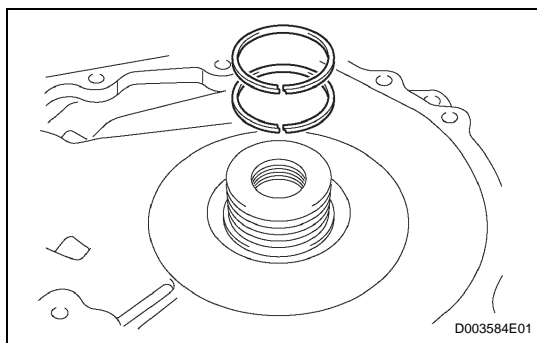
45. REMOVE NO. 1 TRANSAXLE CASE PLUG

- (a) Remove the 2 plugs from the transaxle rear cover.
(b) Remove the 2 O-rings from the 2 plugs.

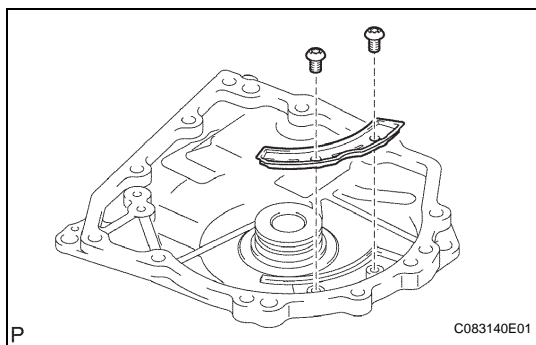


46. REMOVE TRANSAXLE REAR COVER SUB-ASSEMBLY

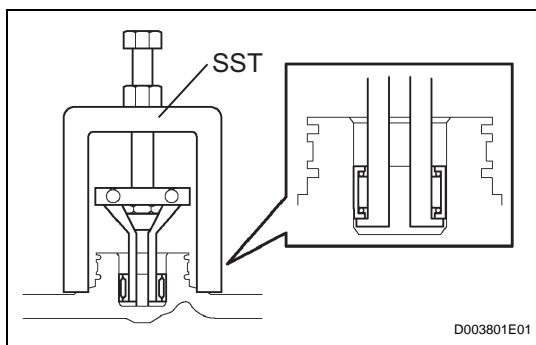
- (a) Remove the 11 bolts.



- (b) Tap in the circumference of the rear cover with a plastic-faced hammer to remove the transaxle rear cover from the transaxle.
(c) Remove the 2 oil seal rings from the transaxle rear cover.

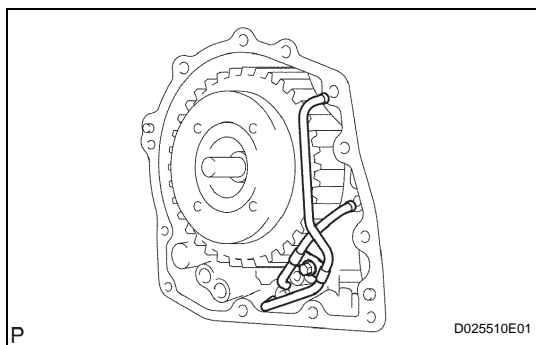


- (d) Using a T30 "torx" socket wrench, remove the 2 screws and transaxle rear cover plate.



- (e) Using SST, remove the needle-roller bearing from the transaxle rear cover.

SST 09387-00041 (09387-01040, 09387-01010, 09387-01030)

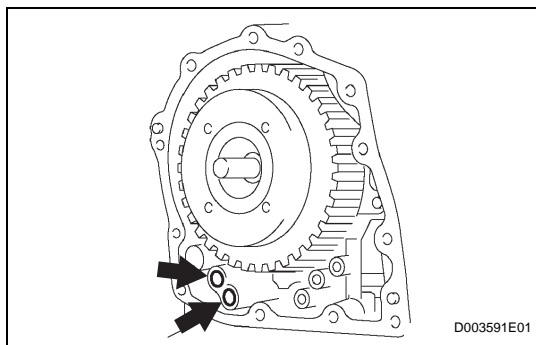


47. REMOVE BRAKE APPLY TUBE

- Remove the bolt, clamp and 2 brake apply tubes.
- Remove the brake apply tube from the clamp.

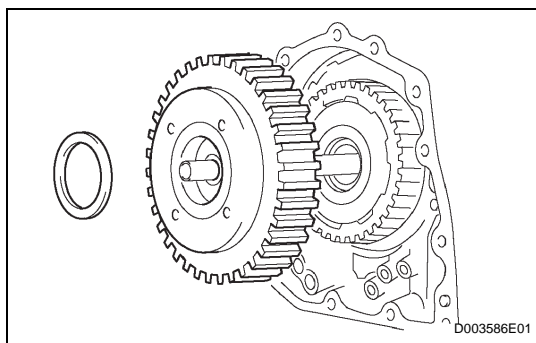
48. REMOVE FRONT CLUTCH APPLY TUBE

- Remove the front clutch apply tube from the clamp.



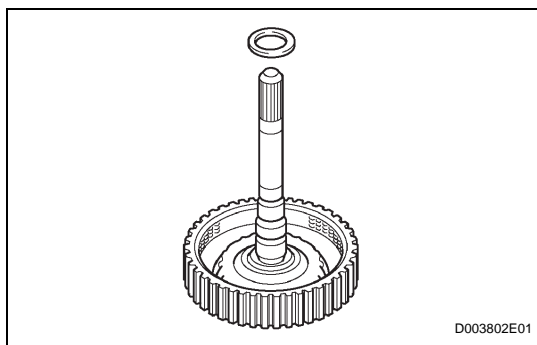
49. REMOVE NO. 1 GOVERNOR APPLY GASKET

- Using a screwdriver, remove the 2 apply gaskets.

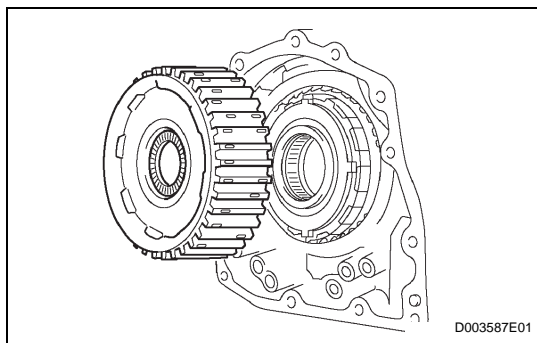


50. REMOVE DIRECT CLUTCH ASSEMBLY

- Remove the thrust bearing and direct clutch from the transaxle.

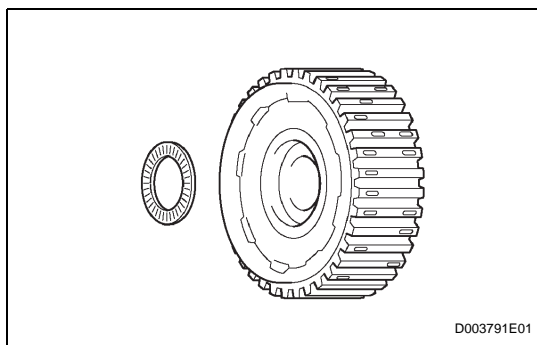


- (b) Remove the bearing race from the direct clutch.

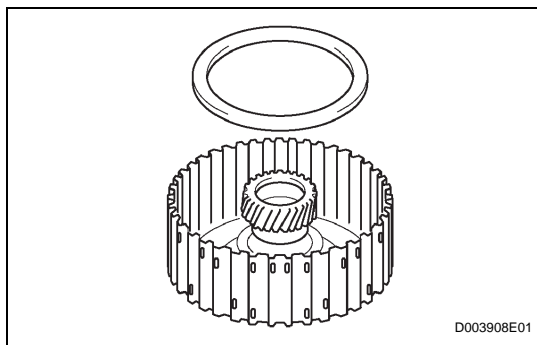


51. REMOVE REAR PLANETARY SUN GEAR ASSEMBLY

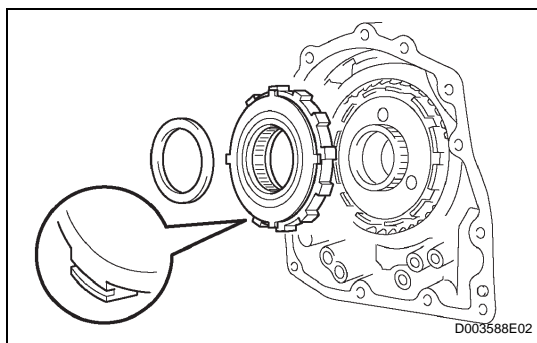
- (a) Remove the rear planetary sun gear from the transaxle.



- (b) Remove the thrust bearing from the rear planetary sun gear.

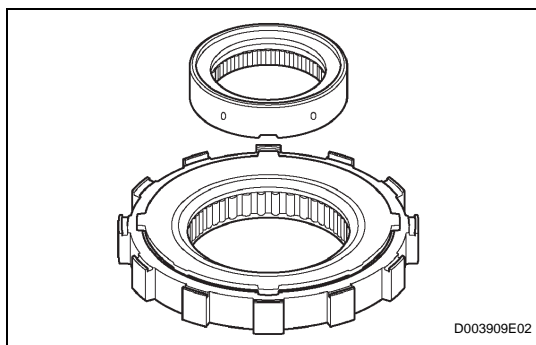


- (c) Remove the No. 1 thrust washer from the rear planetary sun gear.

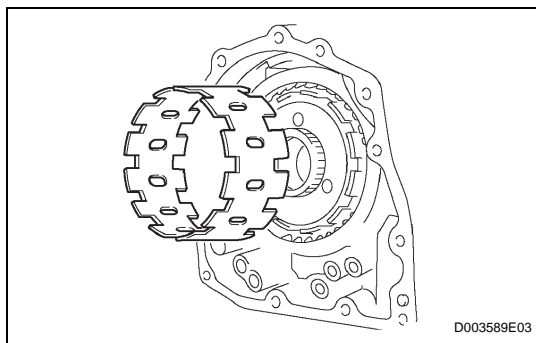


52. REMOVE 1-WAY CLUTCH ASSEMBLY

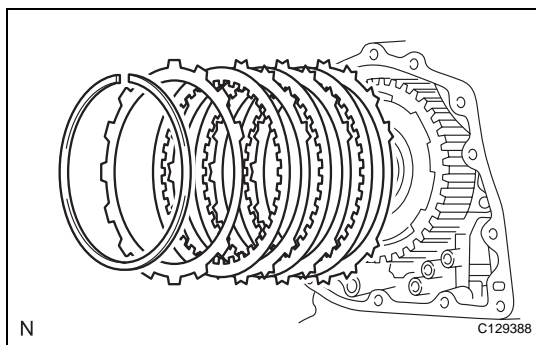
- (a) Remove the 1-way clutch and thrust bearing from the transaxle.



(b) Remove the inner race from the 1-way clutch.



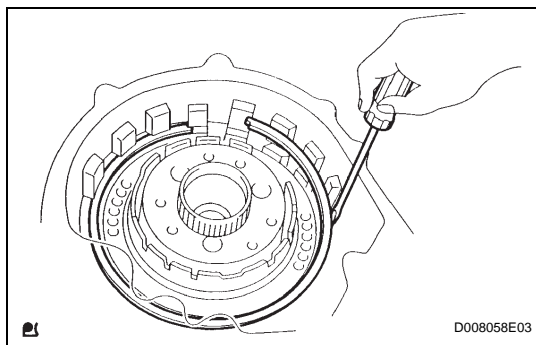
53. REMOVE 1-WAY CLUTCH OUTER SLEEVE



54. REMOVE 2ND BRAKE CLUTCH DISC

- (a) Using a screwdriver, remove the snap ring.
- (b) Remove the flange, 3 discs and 3 plates from the transaxle.

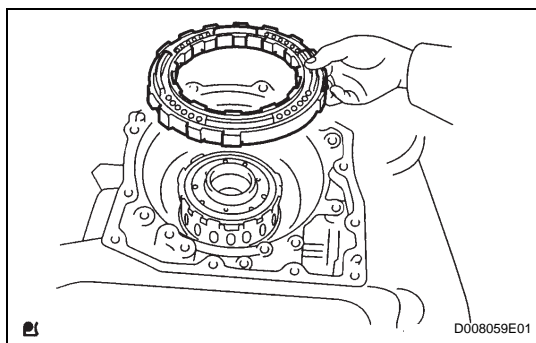
55. INSPECT 2ND BRAKE CLUTCH DISC (See page [AX-185](#))

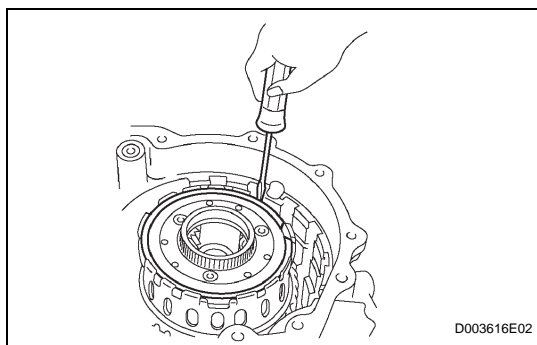


56. REMOVE 2ND BRAKE PISTON ASSEMBLY

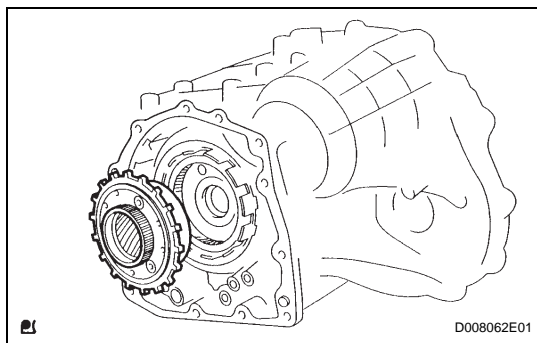
- (a) Using a screwdriver, remove the snap ring.

(b) Remove the 2nd brake piston from the transaxle.

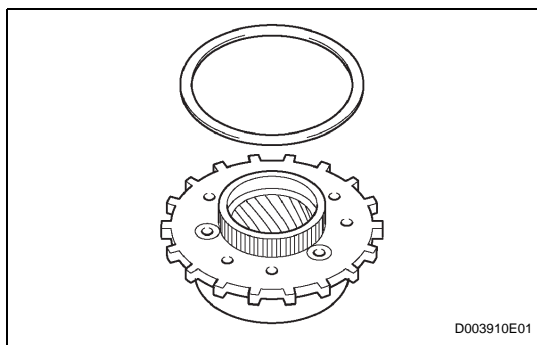


**57. REMOVE REAR PLANETARY GEAR ASSEMBLY**

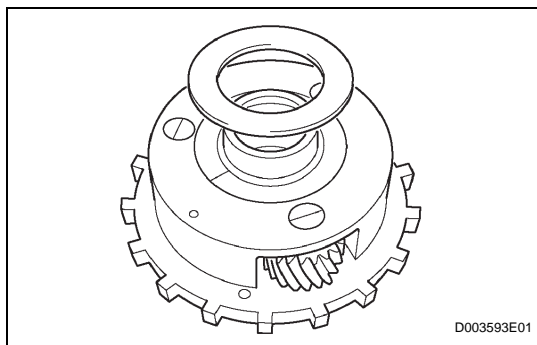
(a) Using a screwdriver, pry out the snap ring.



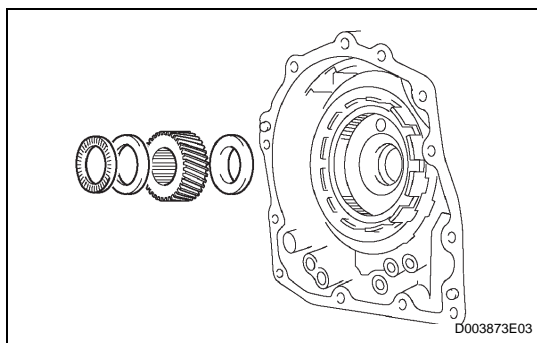
(b) Remove the rear planetary gear from the transaxle.



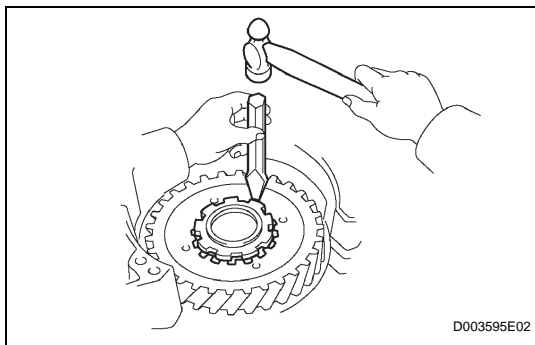
(c) Remove the No. 1 planetary carrier thrust washer from the rear planetary gear.



(d) Remove the bearing race from the rear planetary gear.

**58. REMOVE INPUT SUN GEAR**

(a) Remove the 2 thrust bearings, bearing race and input sun gear from the transaxle.

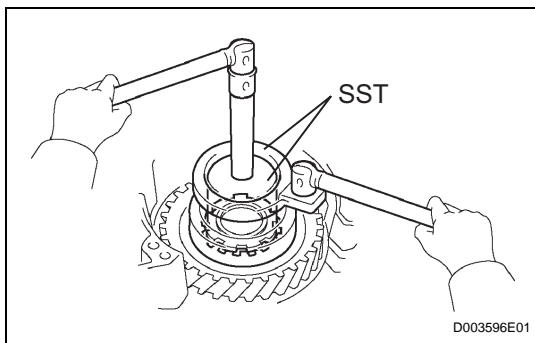


59. REMOVE FRONT PLANETARY GEAR ASSEMBLY

- (a) Using a chisel and hammer, unstake the lock washer.

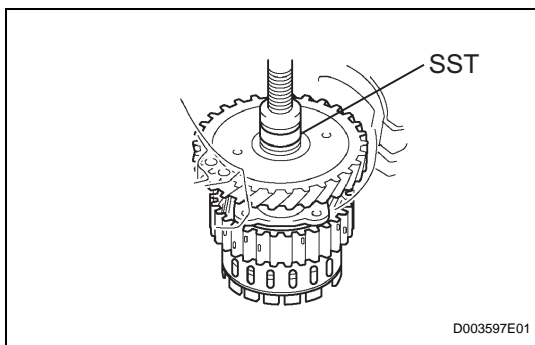
NOTICE:

Push down all claws of the washer. Otherwise SST cannot be fully pressed against the nut and cannot loosen the nut.



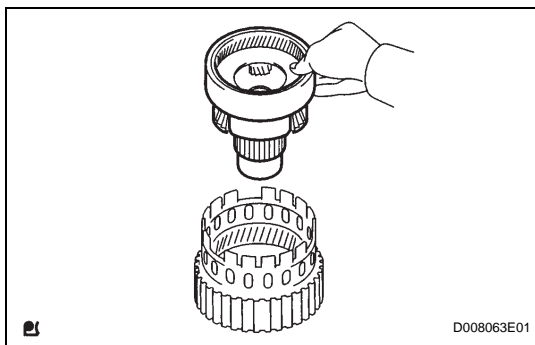
- (b) Using SST, remove the nut.

SST 09387-00030, 09387-00080

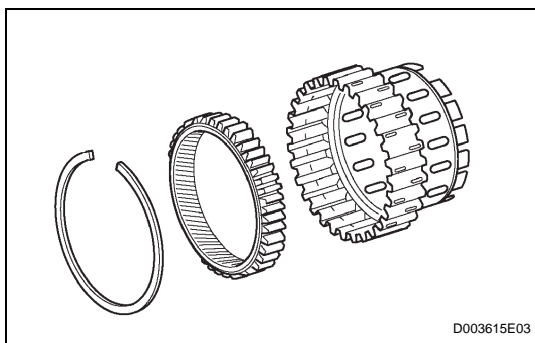


- (c) Using SST and a press, remove the front planetary gear from the counter drive gear.

SST 09950-60010 (09951-00450)

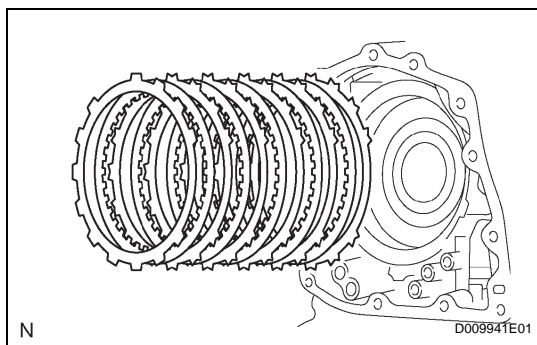


- (d) Remove the front planetary gear from the brake hub.



60. REMOVE FRONT PLANETARY RING GEAR

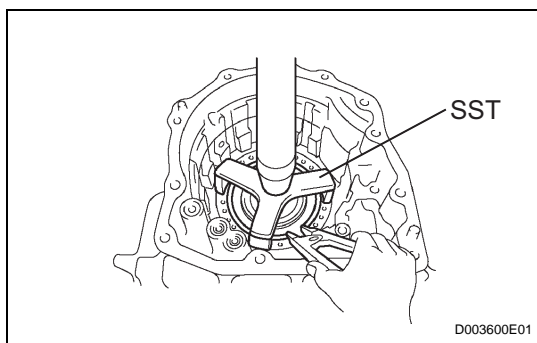
- (a) Using a screwdriver, remove the snap ring and front planetary ring gear from the brake hub.

**61. REMOVE 1ST AND REVERSE BRAKE CLUTCH DISC**

- (a) Remove the flange, 5 discs and 5 plates from the transaxle case.

62. INSPECT 1ST AND REVERSE BRAKE CLUTCH DISC

(See page [AX-185](#))

**63. REMOVE 1ST AND REVERSE BRAKE RETURN SPRING SUB-ASSEMBLY**

- (a) Using SST, a press and snap ring expander, remove the snap ring and piston return spring.

SST 09387-00070

NOTICE:

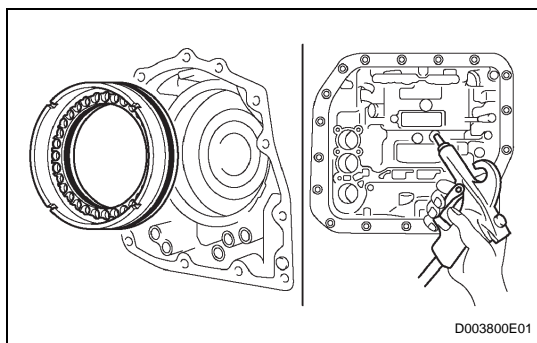
- Stop the press when the spring sheet is lowered 1 to 2 mm (0.039 to 0.078 in.) from the snap ring groove, preventing the spring sheet from deforming.
- Do not expand the snap ring excessively.

64. INSPECT 1ST AND REVERSE BRAKE RETURN SPRING SUB-ASSEMBLY (See page [AX-186](#))**65. REMOVE 1ST AND REVERSE BRAKE PISTON**

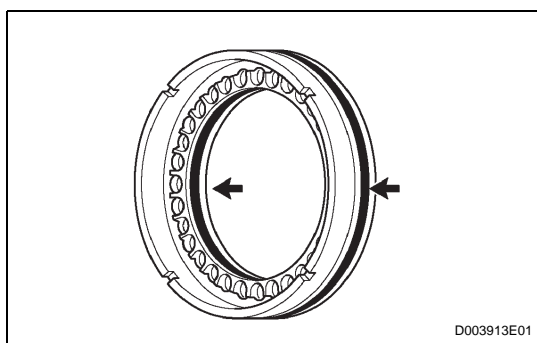
- (a) Apply compressed air (392 kPa, 4.0 kgf/cm², 57 psi) to the transaxle case to remove the 1st and reverse brake piston.

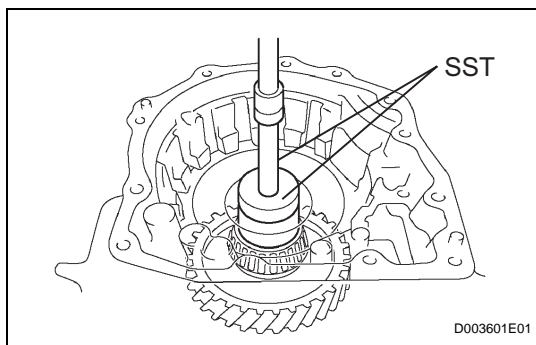
NOTICE:

- Applying compressed air may cause the piston to jump out. When removing the piston, hold it with your hand using a waste cloth.
- Make sure not to spatter ATF when applying compressed air.



- (b) Remove the 2 O-rings from the 1st and reverse brake piston.

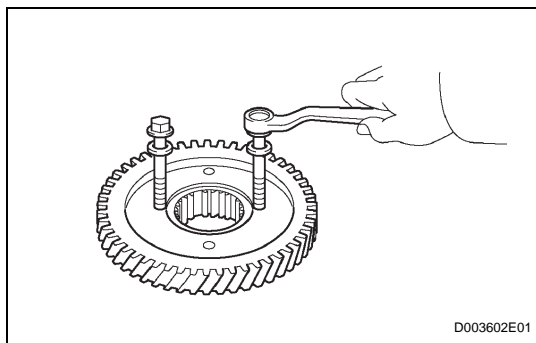




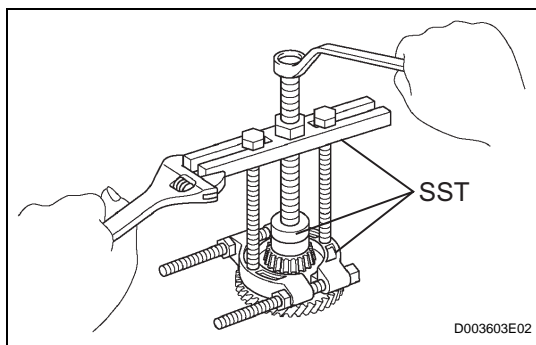
66. REMOVE COUNTER DRIVE GEAR

- (a) Using SST and a press, remove the counter drive gear from the transaxle case.

SST 09950-60010 (09951-00580), 09950-70010 (09951-07100)

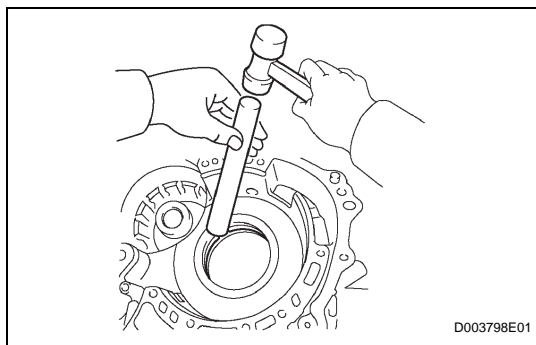


- (b) As shown in the illustration, tighten the 2 bolts evenly and make a clearance of approximately 20.0 mm (0.797 in.) between the counter drive gear and the inner race.

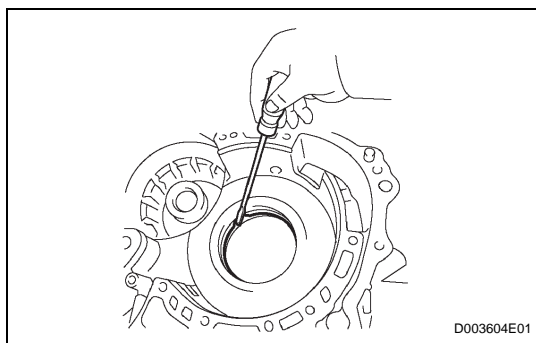


- (c) Using SST, remove the tapered roller bearing.

SST 09950-60010 (09951-00580), 09950-00020, 09950-00030



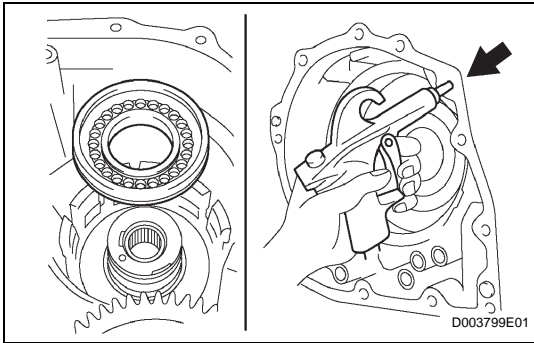
- (d) Using a brass bar and hammer, tap out the 2 bearing outer races.



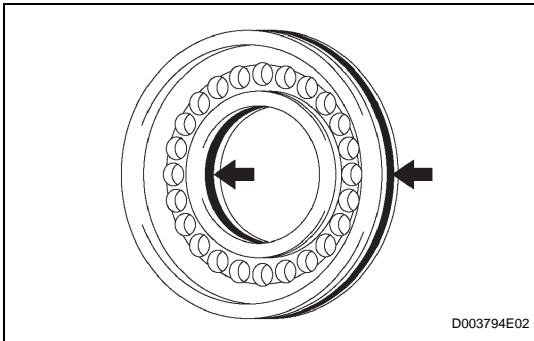
67. REMOVE COUNTER DRIVE GEAR HOLE SNAP RING

- (a) Using a screwdriver, pry out the snap ring from the transaxle.

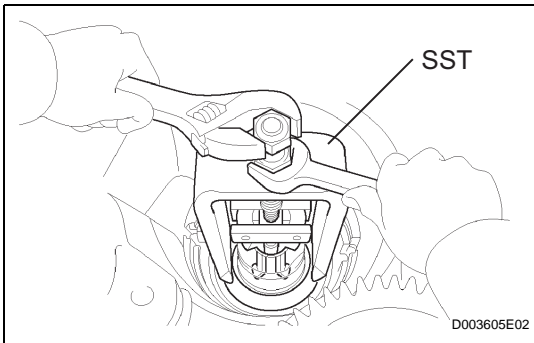
68. REMOVE NO. 2 BREATHER PLUG

**69. REMOVE UNDERDRIVE BRAKE PISTON**

- (a) Apply compressed air (392 kPa, 4.0 kgf/cm², 57 psi) to the transaxle case to remove the underdrive brake piston.

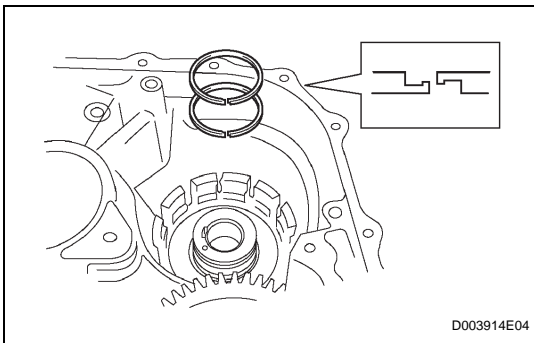


- (b) Remove the 2 O-rings from the underdrive brake piston.

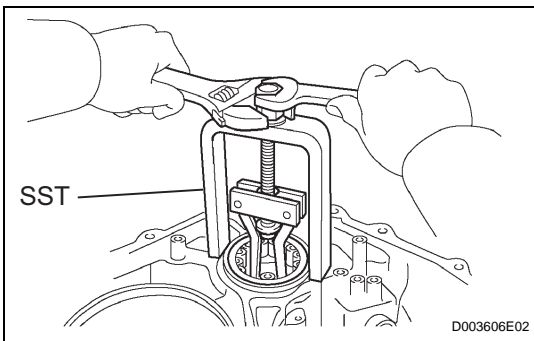


- (c) Using SST, remove the needle-roller bearing from the transaxle.

SST 09387-00041 (09387-01010, 09387-01030, 09387-01040)

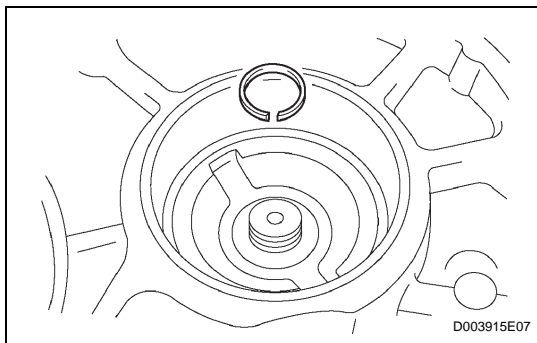
**70. REMOVE UNDERDRIVE CLUTCH DRUM OIL SEAL RING**

- (a) Remove the 2 oil seal rings from the transaxle.

**71. REMOVE UNDERDRIVE CYLINDRICAL ROLLER BEARING**

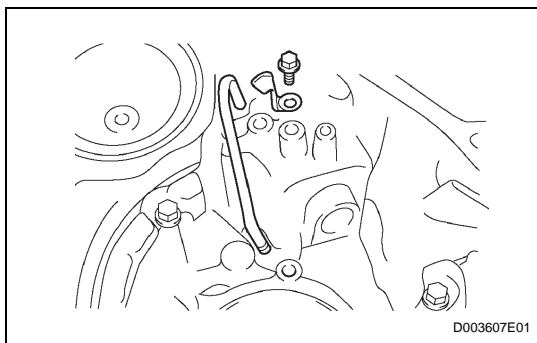
- (a) Using SST, remove the cylindrical roller bearing from the transaxle.

SST 09514-35011



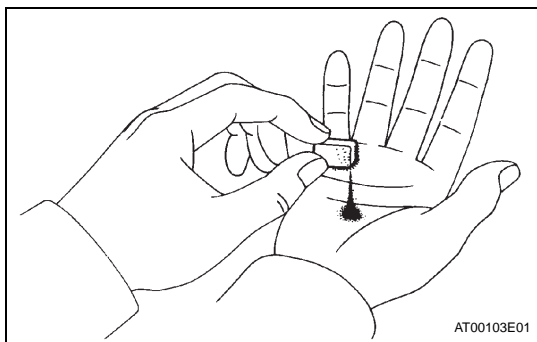
72. REMOVE UNDERDRIVE OUTPUT SHAFT OIL SEAL RING

- (a) Remove the oil seal ring from the transaxle housing.



73. REMOVE DIFFERENTIAL GEAR LUBE APPLY TUBE

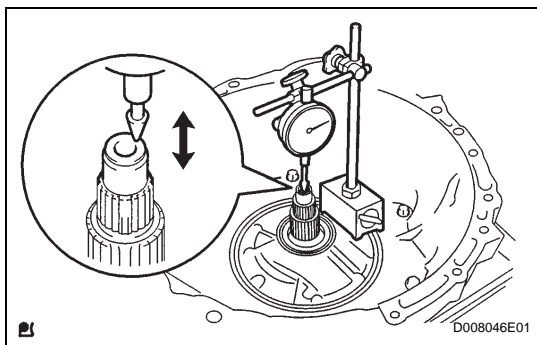
- (a) Remove the bolt, clamp and apply tube from the transaxle.



INSPECTION

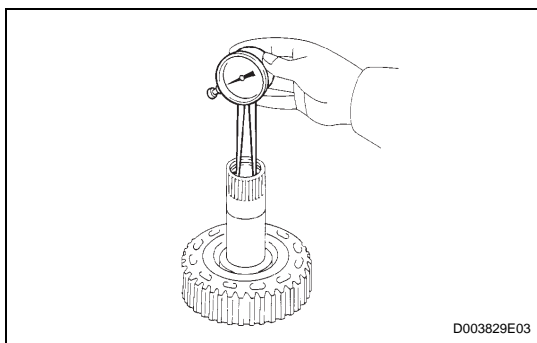
1. INSPECT AUTOMATIC TRANSAXLE OIL PANEL SUB-ASSEMBLY

- (a) Remove the magnets and use them to collect any steel chips. Examine the chips and particles in the pan and on the magnet to determine what type of wear has occurred in the transaxle.
 Steel (magnetic): bearing gear and plate wear
 Brass (non-magnetic): bush wear



2. INSPECT INPUT SHAFT END PLAY

- (a) Using a dial indicator, measure the input shaft end play.
Standard end play:
 0.262 to 1.249 mm (0.0103 to 0.0492 in.)

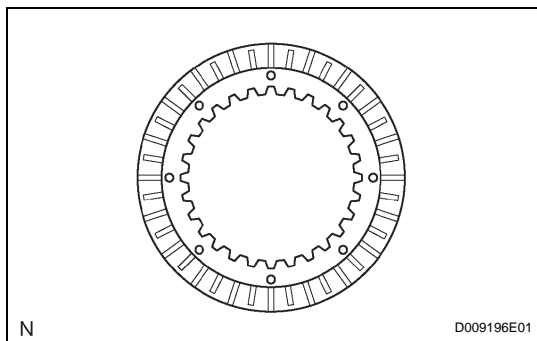


3. INSPECT MULTIPLE DISC CLUTCH HUB

- (a) Using a caliper gauge, measure the inside diameter of the forward clutch hub bushing.
Standard inside diameter:
 23.025 to 23.045 mm (0.9065 to 0.9073 in.)
Maximum inside diameter:
 23.09 mm (0.9091 in.)
NOTICE:
 • When the diameter is over the maximum, replace the multiple disc clutch hub with a new one.

- Check the contact surface of the bush in the direct clutch shaft. If any scratch or discolor is identified, replace the direct clutch sub-assembly with a new one.

If the inside diameter is greater than the maximum, replace the forward clutch hub.

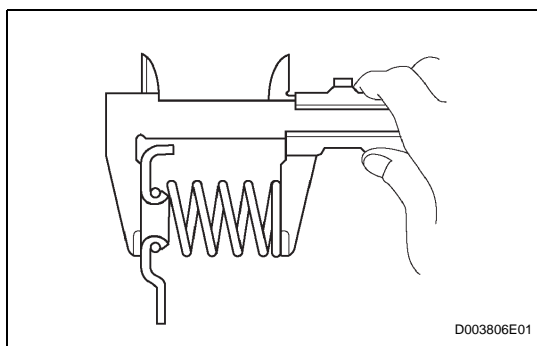


4. INSPECT NO. 2 UNDERDRIVE CLUTCH DISC

- (a) Check to see if the sliding surface of the disc, plate and flange are worn or burnt. If necessary, replace them.

NOTICE:

- If the lining of the disc is peeling off or discolored, or even if a part of the groove is defaced, replace all discs.
- Before assembling new discs, soak them in ATF for at least 15 minutes.

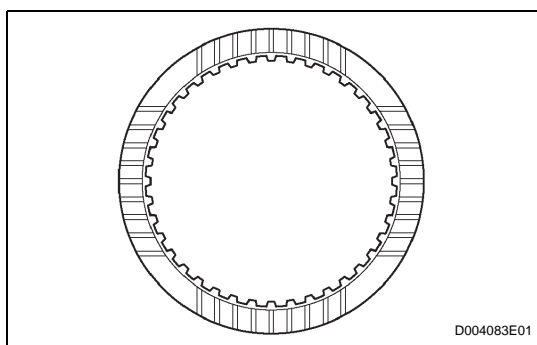


5. INSPECT UNDERDRIVE BRAKE RETURN SPRING SUB-ASSEMBLY

- (a) Using a vernier caliper, measure the free length of the spring together with the spring seat.

Standard free length:

14.04 mm (0.5528 in.)

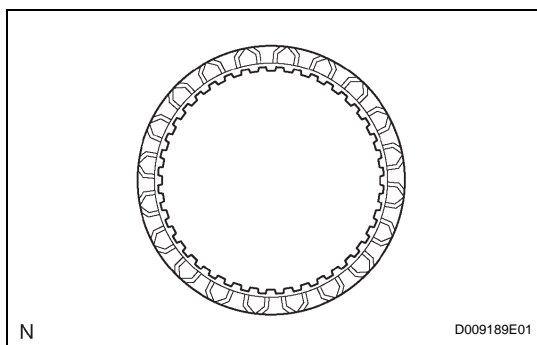


6. INSPECT 2ND BRAKE CLUTCH DISC

- (a) Check to see if the sliding surface of the disc, plate and flange are worn or burnt. If necessary, replace them.

NOTICE:

- If the lining of the disc is peeling off or discolored, or even if a part of the printed number is defaced, replace all discs.
- Before assembling new discs, soak them in ATF for at least 15 minutes.

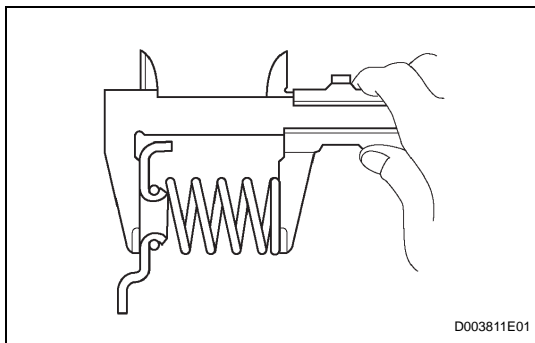


7. INSPECT 1ST AND REVERSE BRAKE CLUTCH DISC

- (a) Check to see if the sliding surface of the disc, plate and flange are worn or burnt. If necessary, replace them.

NOTICE:

- If the lining of the disc is peeling off or discolored, or even if a part of the groove is defaced, replace all discs.
- Before assembling new discs, soak them in ATF for at least 15 minutes.

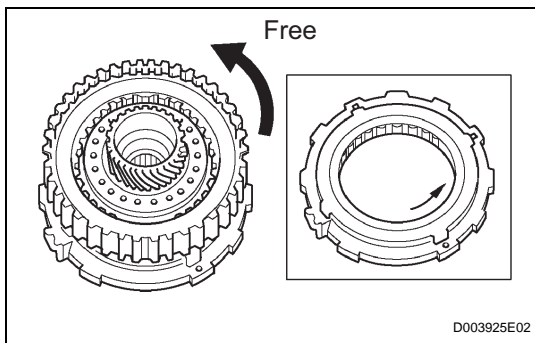


8. INSPECT 1ST AND REVERSE BRAKE RETURN SPRING SUB-ASSEMBLY

- (a) Using a vernier caliper, measure the free length of the spring together with the spring seat.

Standard free length:

15.51 mm (0.6106 in.)

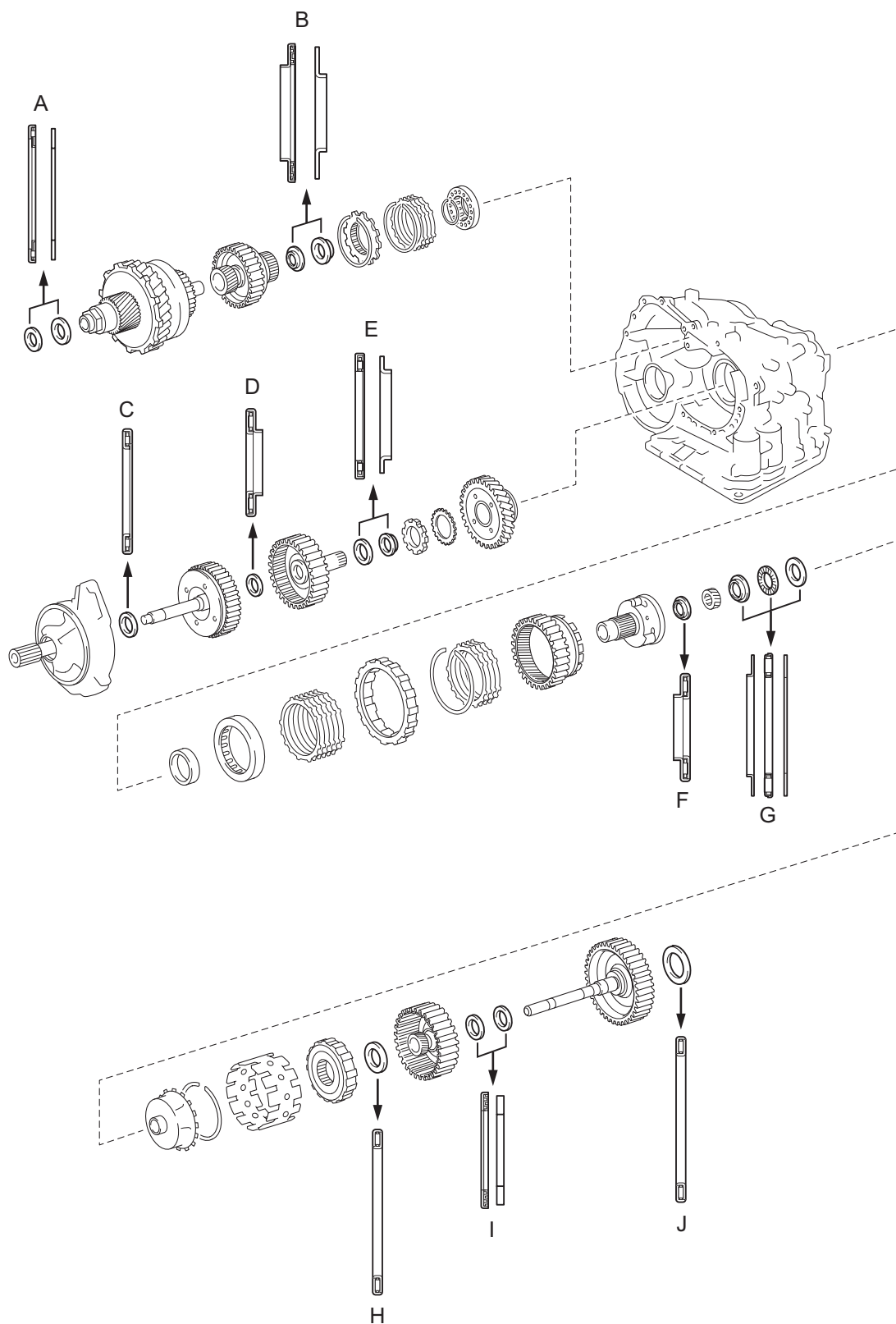


9. INSPECT UNDERDRIVE 1-WAY CLUTCH ASSEMBLY

- (a) Install the underdrive clutch assembly to the 1-way clutch. Rotate the underdrive clutch assembly to check the rotating direction for the lock or free operation.

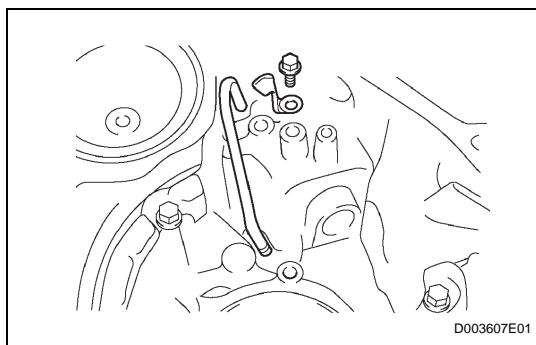
REASSEMBLY

1. BEARING POSITION



Standard bearing position

Mark	Front Race Diameter Inside / Outside	Thrust Bearing Diameter Inside / Outside	Rear Race Diameter Inside / Outside
A	-	57.2 mm (2.252 in.) / 84.96 mm (3.3449 in.)	56.4 mm (2.220 in.) / 83.0 mm (3.268 in.)
B	-	37.73 mm (1.4854 in.) / 58.0 mm (2.283 in.)	29.9 mm (1.177 in.) / 55.5 mm (2.185 in.)
C	-	33.85 mm (1.3327 in.) / 52.2 mm (2.055 in.)	-
D	-	23.5 mm (0.925 in.) / 44.0 mm (1.732 in.)	-
E	-	36.3 mm (1.429 in.) / 52.2 mm (2.055 in.)	34.5 mm (1.358 in.) / 48.5 mm (1.909 in.)
F	-	34.6 mm (1.362 in.) / 52.2 mm (2.055 in.)	-
G	40.3 mm (1.587 in.) / 58.0 mm (2.283 in.)	38.6 mm (1.520 in.) / 60.0 mm (2.362 in.)	38.6 mm (1.520 in.) / 58.0 mm (2.283 in.)
H	-	53.6 mm (2.110 in.) / 69.6 mm (2.740 in.)	-
I	-	33.8 mm (1.331 in.) / 48.2 mm (1.898 in.)	30.3 mm (1.193 in.) / 46.0 mm (1.811 in.)
J	-	53.6 mm (2.110 in.) / 70.18 mm (2.763 in.) or 69.6 mm (2.740 in.)	-

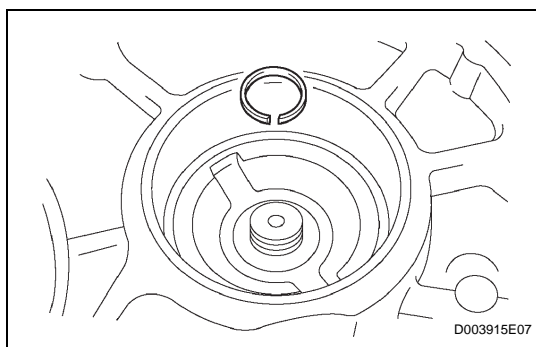
**2. INSTALL DIFFERENTIAL GEAR LUBE APPLY TUBE**

- (a) Install the apply tube and clamp to the transaxle housing with the bolt.

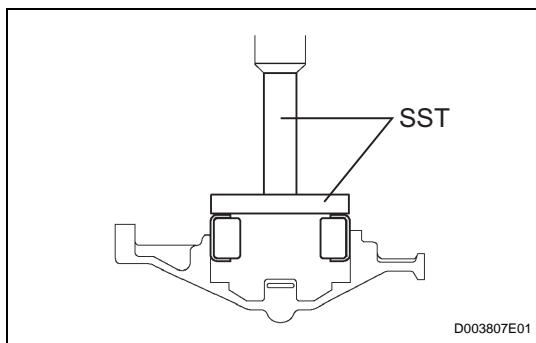
Torque: 9.8 N*m (100 kgf*cm, 87 in.*lbf)

NOTICE:

Make sure to insert the pipe to the stopper.

**3. INSTALL UNDERDRIVE OUTPUT SHAFT OIL SEAL RING**

- (a) Install a new oil seal ring to the transaxle housing.

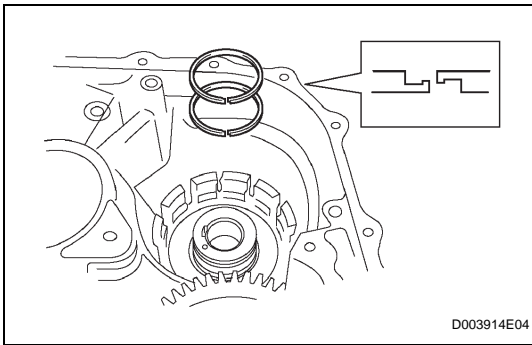
**4. INSTALL UNDERDRIVE CYLINDRICAL ROLLER BEARING**

- (a) Using SST and a press, press in the underdrive cylindrical roller bearing.

SST 09950-60020 (09951-00810), 09950-70010 (09951-07100)

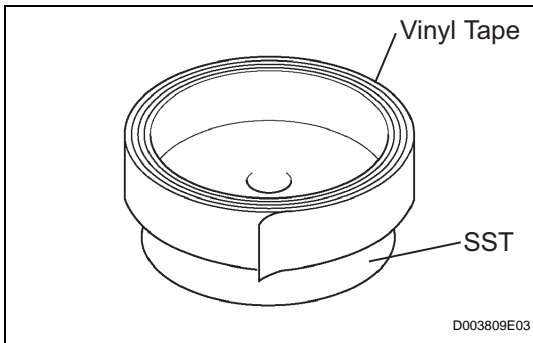
NOTICE:

Do not apply excessive pressure.



5. INSTALL UNDERDRIVE CLUTCH DRUM OIL SEAL RING

- (a) Install 2 new oil seal rings to the transaxle.



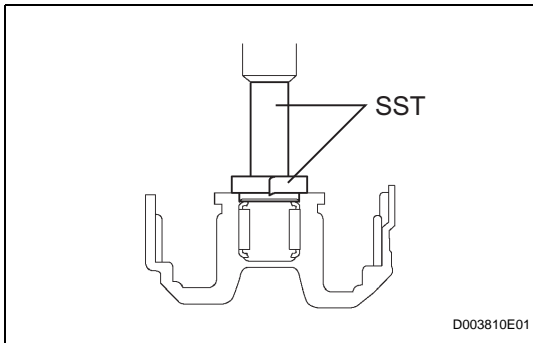
6. INSTALL UNDERDRIVE BRAKE PISTON

- (a) Wind a vinyl tape around SST at the place 4.0 mm (0.157 in.) above from the bottom end until the thickness of the wound tape is about 5.0 mm (0.197 in.)

SST 09950-60010 (09951-00320)

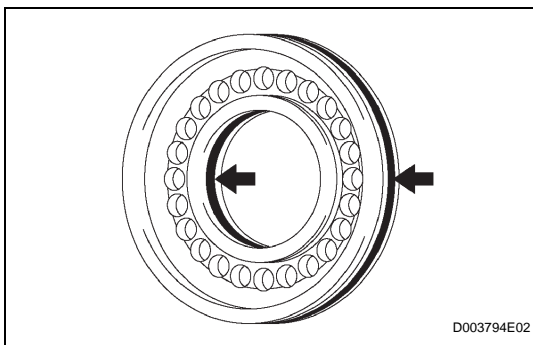
NOTICE:

Clean SST to remove deposited oil before winding a vinyl tape.

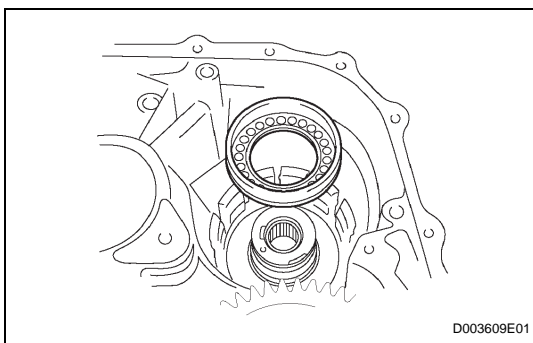


- (b) Using SST and a press, press in the needle-roller bearing to the transaxle until the wound vinyl tape contacts the transaxle case.

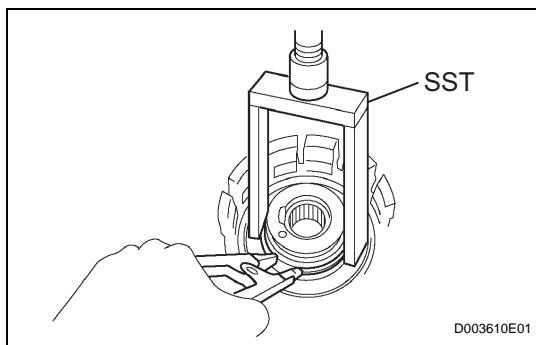
SST 09950-60010 (09951-00320), 09950-70010 (09951-07100)



- (c) Coat 2 new O-rings with ATF, and install them to the underdrive brake piston.



- (d) Install the underdrive brake piston to the transaxle.



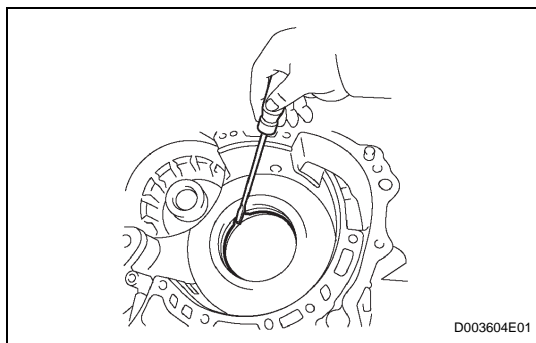
- (e) Using SST, a snap ring expander and press, press in the piston return spring and snap ring to the transaxle.

SST 09387-00020

NOTICE:

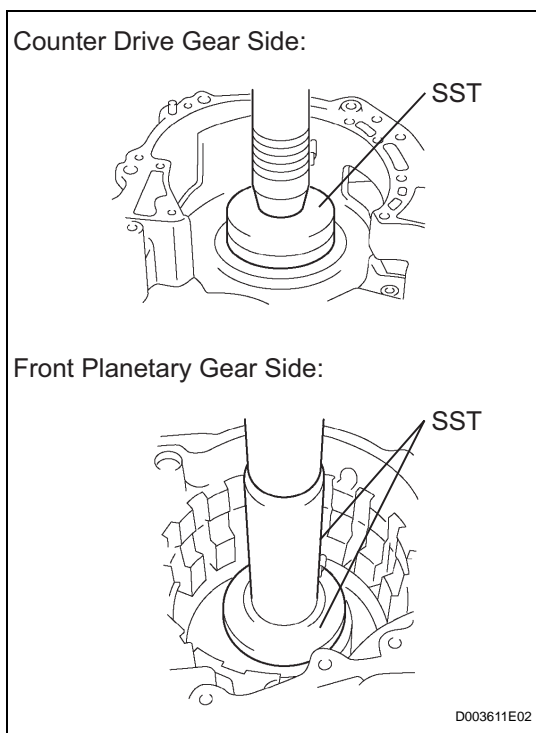
Do not apply excessive pressure.

7. INSTALL NO. 2 BREATHER PLUG



8. INSTALL COUNTER DRIVE GEAR HOLE SNAP RING

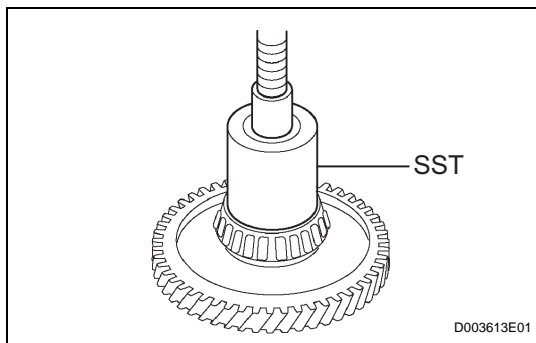
- (a) Using a screwdriver, press in the snap ring to the transaxle.



9. INSTALL COUNTER DRIVE GEAR

- (a) Using SST and a press, press in the 2 bearings outer races to the transaxle.

SST 09950-60020 (09951-00890), 09950-70010 (09951-07150)

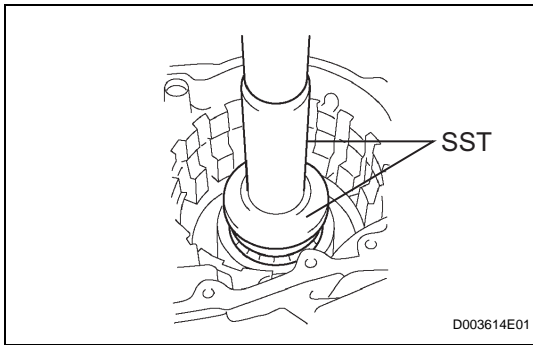


- (b) Using SST and a press, press in the tapered roller bearing to the counter drive gear until the bearing race contacts with the snap ring.

NOTICE:

Do not apply excessive pressure.

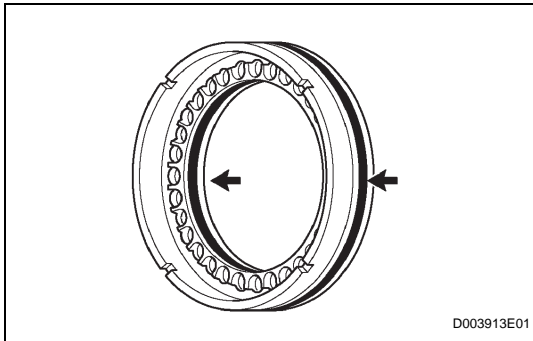
SST 09649-17010



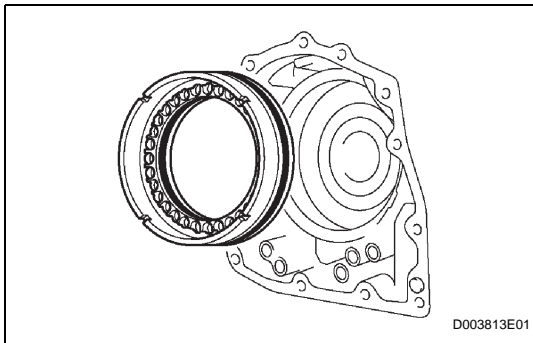
- (c) Using SST and a press, install the counter drive gear and bearing to the transaxle.
SST 09950-70010 (09951-07150), 09950-60020 (09951-00750)

NOTICE:

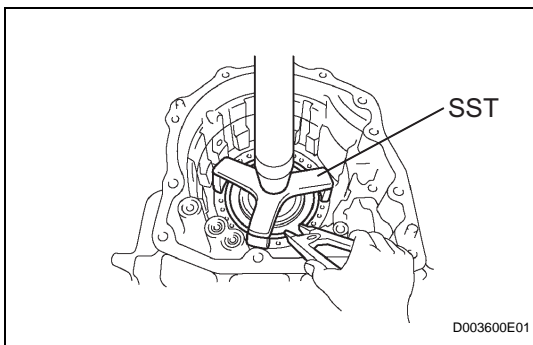
Do not apply excessive pressure.

**10. INSTALL 1ST AND REVERSE BRAKE PISTON**

- (a) Coat 2 new O-rings with ATF.
 (b) Install the 2 O-ring to the 1st and reverse brake piston.



- (c) Coat the 1st and reverse brake piston with ATF, and install it to the transaxle.

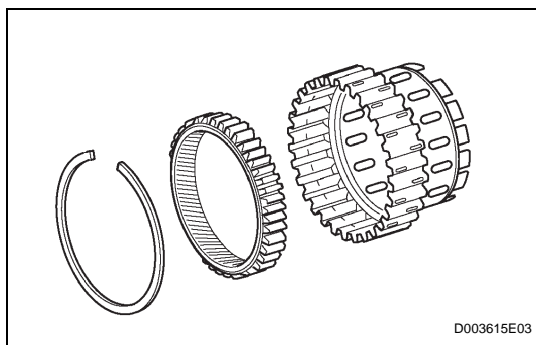
**11. INSTALL 1ST AND REVERSE BRAKE RETURN SPRING SUB-ASSEMBLY**

- (a) Using SST, a press and snap ring expander, press the piston return spring and snap ring to the transaxle.

SST 09387-00070

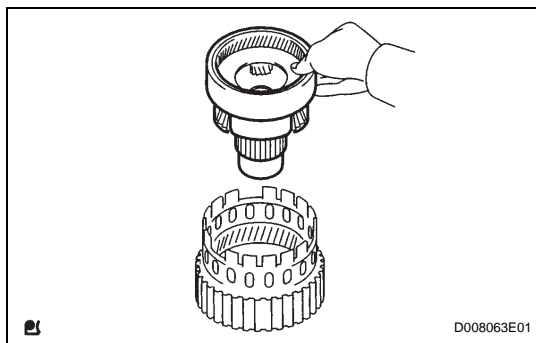
NOTICE:

- Stop the press when the spring sheet is lowered to the place 1 to 2 mm (0.039 to 0.078 in.) from the snap ring groove, preventing the spring sheet from being deform.
- Do not expand the snap ring excessively.



12. INSTALL FRONT PLANETARY RING GEAR

- (a) Using a screwdriver, install the front planetary ring gear and snap ring to the brake hub.



13. INSTALL FRONT PLANETARY GEAR ASSEMBLY

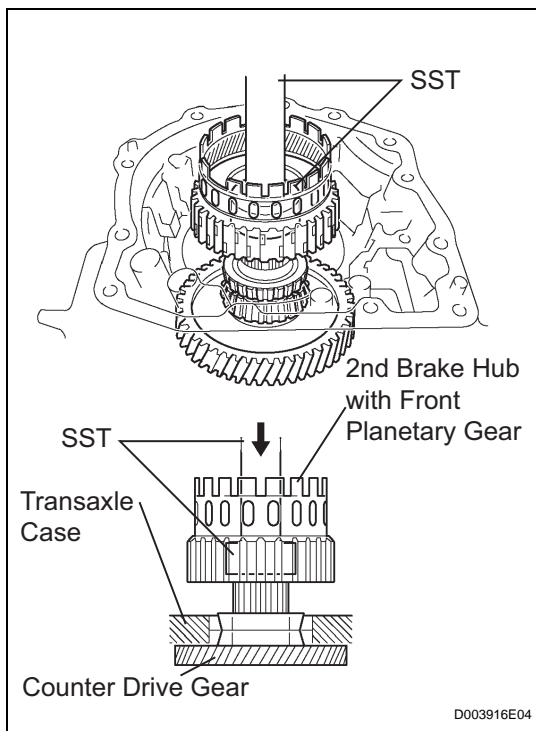
- (a) Install the front planetary gear assembly to the brake hub.

- (b) Using SST and a press, press-fit the front planetary gear.

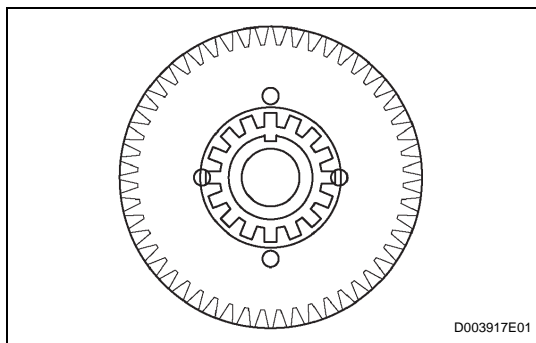
SST 09950-60010 (09951-00500), 09950-70010 (09951-07100)

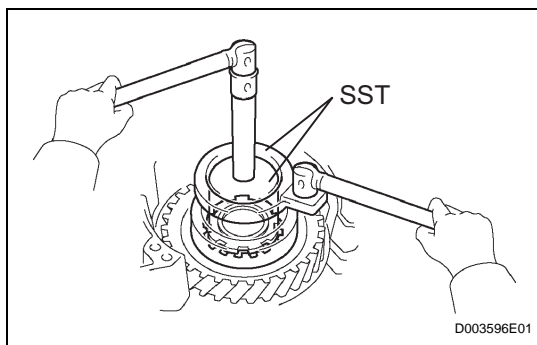
NOTICE:

Do not apply excessive pressure.



- (c) Install the washer, as shown in the illustration.

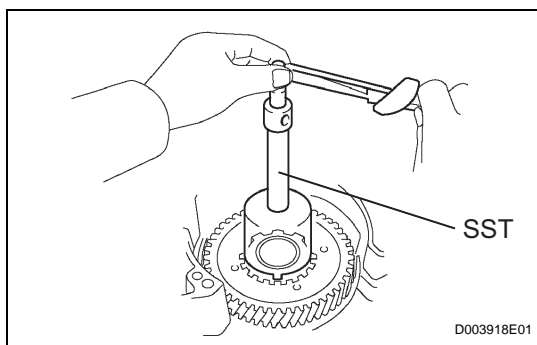




- (d) Using SST, install the nut.

SST 09387-00030, 09387-00080

Torque: 280 N*m (2,855 kgf*cm, 206 ft.*lbf)



- (e) Using SST and a torque wrench, measure the turning torque of the bearing while rotating SST at 60 rpm. When the measured value is not within the specified value, gradually tighten the nut until it reaches the specified value.

SST 09387-00080

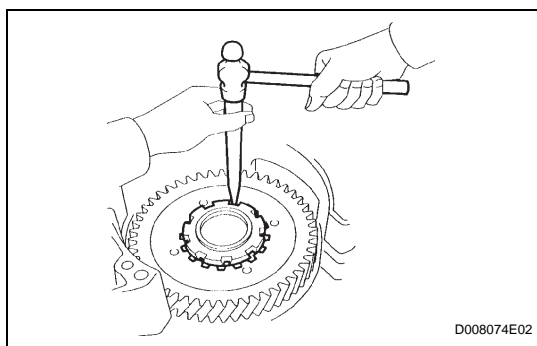
Torque: Turning torque at 60 rpm

0.51 to 1.02 N*m (5.1 to 10.0 kgf*cm, 4.4 to 8.7 in.*lbf) for new

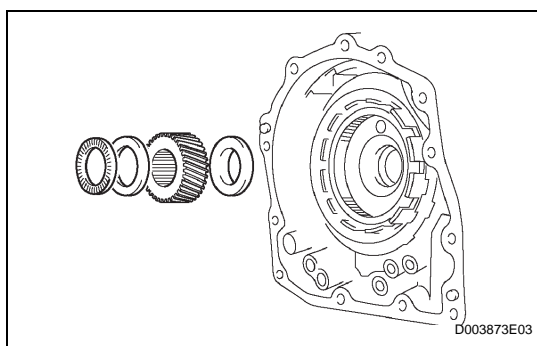
0.3 to 0.5 N*m (3.1 to 5.1 kgf*cm, 27 to 4.4 in.*lbf) for used

HINT:

Use a torque wrench with a fulcrum length of 160 mm (6.3 in.).



- (f) Using a chisel and hammer, stake the front planetary gear washer.

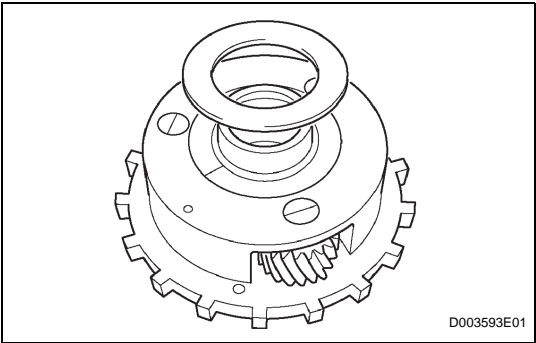


14. INSTALL INPUT SUN GEAR

- (a) Install the 2 thrust bearings, bearing race and front planetary sun gear to the front planetary gear.

Standard bearing and race diameter

Item	Inside	Outside
Bearing	34.6 mm (1.362 in.)	52.2 mm (2.055 in.)
Race	40.3 mm (1.587 in.)	58.0 mm (2.283 in.)
Bearing	38.6 mm (1.52 in.)	60.0 mm (2.362 in.)

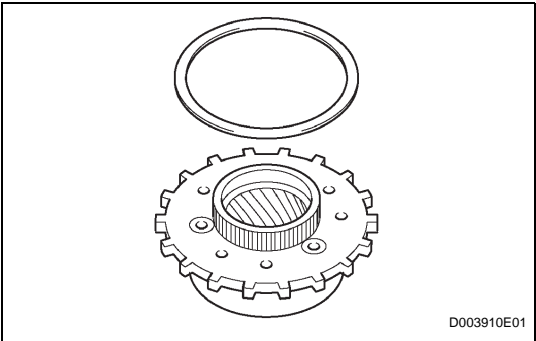


15. INSTALL REAR PLANETARY GEAR ASSEMBLY

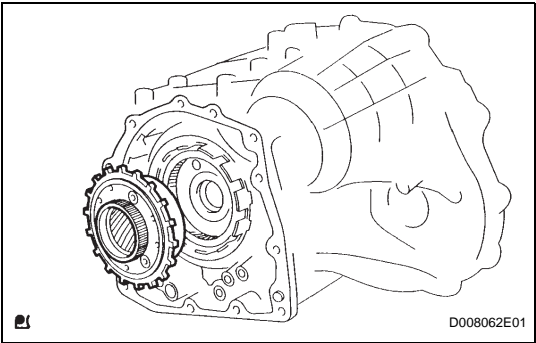
- (a) Coat the bearing race with ATF, and install it to the rear planetary gear assembly.

Standard bearing race diameter

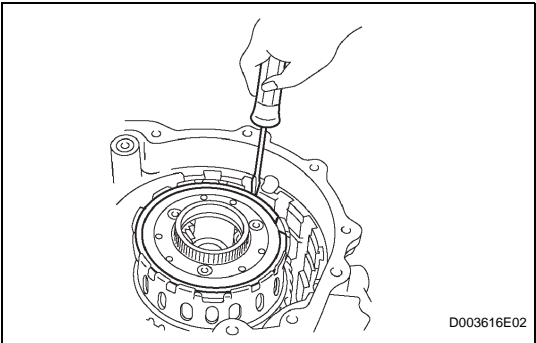
Item	Inside	Outside
Race	38.6 mm (1.520 in.)	58.0 mm (2.83 in.)



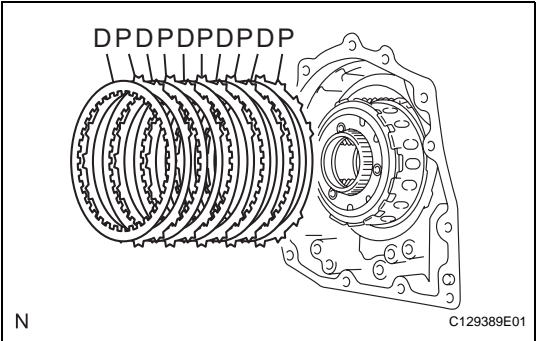
- (b) Install the No. 2 thrust washer.



- (c) Install the rear planetary gear to the rear planetary ring gear.



- (d) Using a screwdriver, install the snap ring.



16. INSTALL 1ST AND REVERSE BRAKE CLUTCH DISC

- (a) Install the 5 plates and 5 discs.

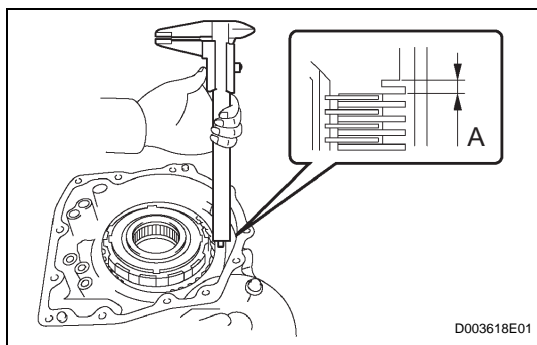
Install in order:

P - D - P - D - P - D - P - D - P - D

HINT:

P = Plate

D = Disc



- (b) Using a vernier caliper, measure the distance between the disc surface and the contact surface of the 2nd brake cylinder and transaxle (Dimension A).
- (c) Select an appropriate flange so that the pack clearance will meet the specified value.
0.745 to 1.21 mm (0.0293 to 0.0476 in.)

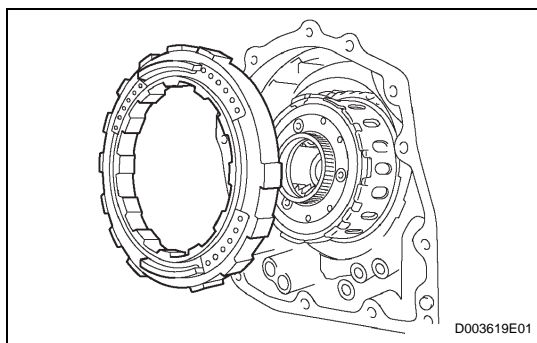
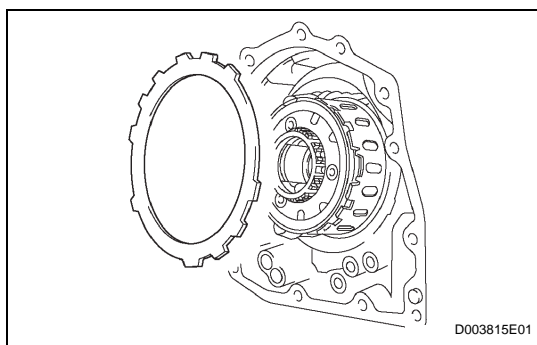
HINT:

Piston stroke = Dimension A - Flange thickness

Standard flange thickness

Mark	Thickness	Mark	Thickness
1	1.8 mm (0.071 in.)	5	2.2 mm (0.087 in.)
2	1.9 mm (0.075 in.)	6	2.3 mm (0.091 in.)
3	2.0 mm (0.079 in.)	7	2.4 mm (0.094 in.)
4	2.1 mm (0.083 in.)	8	2.5 mm (0.098 in.)

- (d) Install the flange.



17. INSTALL 2ND BRAKE PISTON ASSEMBLY

- (a) Install the 2nd brake piston to the transaxle.
- (b) Install the snap ring and measure the inside diameter.

Standard inside diameter:

More than 167 mm (6.57 in.)

NOTICE:

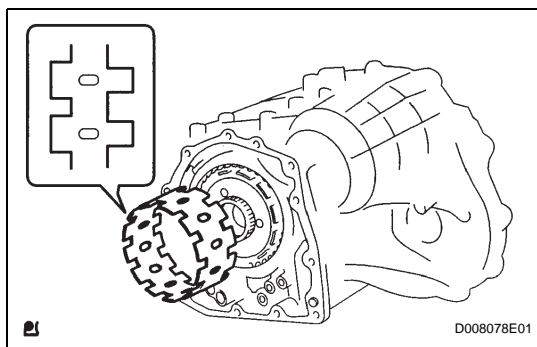
- Because the taper snap ring has the positioning direction, check it when installing.
- When the diameter does not satisfy the specified value, replace the snap ring with a new one.

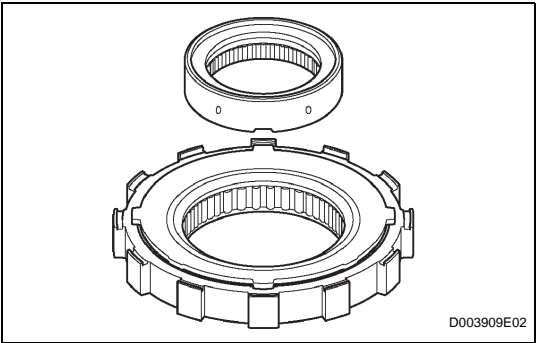
18. INSTALL 1-WAY CLUTCH SLEEVE OUTER

- (a) Install the 1-way clutch outer sleeve to the 2nd brake cylinder.

NOTICE:

Check the positioning direction of the outer sleeve.

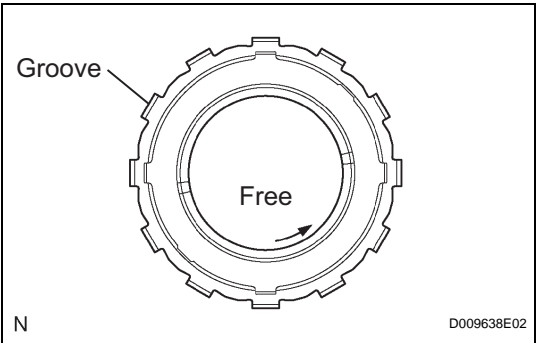




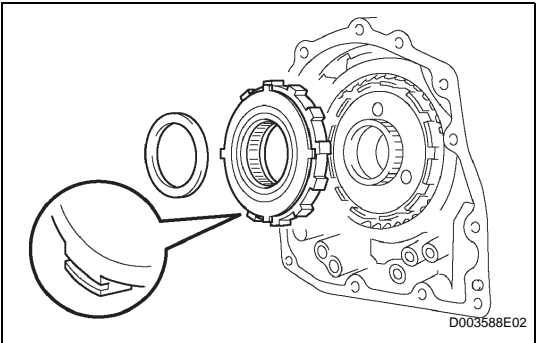
19. INSTALL 1-WAY CLUTCH ASSEMBLY

- (a) Install the inner race to the 1-way clutch.

NOTICE:
Check the direction of the inner race.



- (b) Check the rotating direction of the 1-way clutch for the lock or free operation, as shown in illustration.

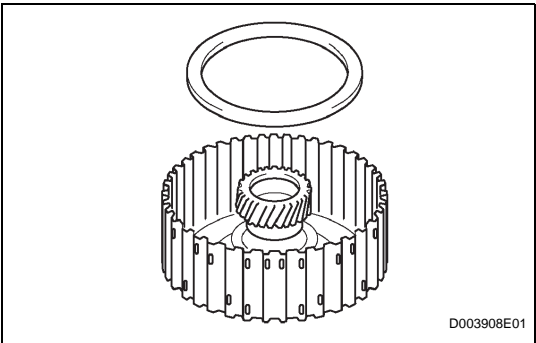


- (c) Install the 1-way clutch and bearing to the 1-way clutch sleeve outer.

Standard bearing diameter

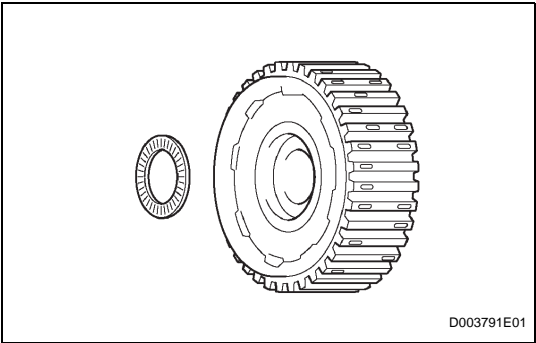
Item	Inside	Outside
Bearing	53.6 mm (2.110 in.)	69.6 mm (2.740 in.)

NOTICE:
Install the thrust bearing properly so that no-colored race will be visible.



20. INSTALL REAR PLANETARY SUN GEAR ASSEMBLY

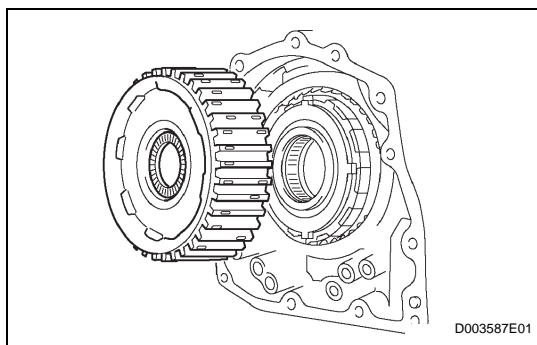
- (a) Coat the No. 1 thrust washer with petroleum jelly, and install it onto the rear planetary sun gear.



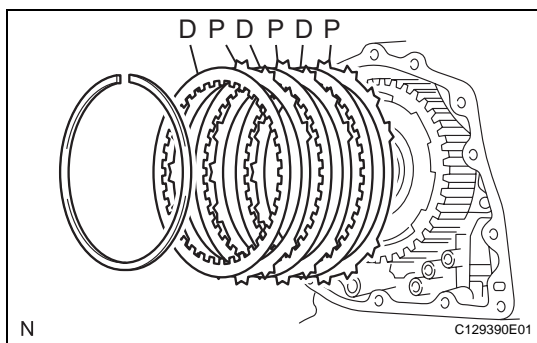
- (b) Coat the bearing with petroleum jelly, and install it onto the rear planetary sun gear.

Standard bearing diameter

Item	Inside	Outside
Bearing	33.8 mm (1.331 in)	48.2 mm (1.898 in.)



- (c) Install the rear planetary sun gear to the rear planetary gear.



21. INSTALL 2ND BRAKE CLUTCH DISC

- (a) Install the 3 discs and 3 plates to the transaxle.

Standard install in order:

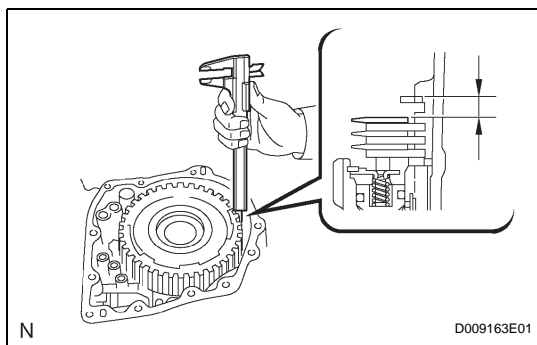
P - D - P - D - P - D

HINT:

P = Plate

D = Disc

- (b) Temporarily install the snap ring.



- (c) Using a vernier caliper, measure the distance between the disc surface and snap ring surface.
- (d) Select an appropriate flange so that the pack clearance will meet the specified value.

Standard pack clearance:

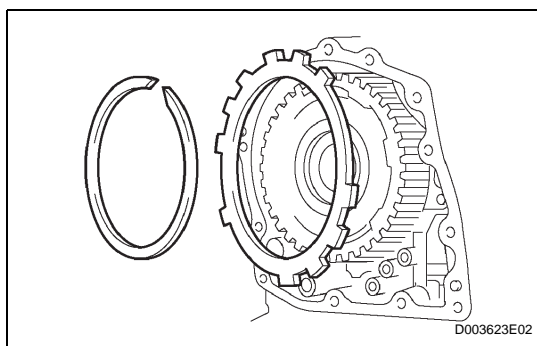
0.50 to 0.91 mm (0.0197 to 0.0358 in.)

HINT:

Piston stroke = Clearance - Flange thickness - Snap ring thickness 1.6 mm (0.063 in.)

Standard flange thickness

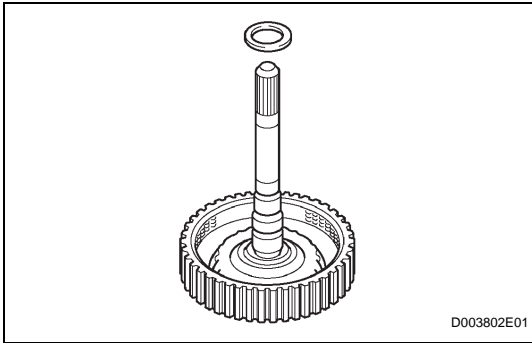
Mark	Thickness	Mark	Thickness
1	3.0 mm (0.118 in.)	5	3.4 mm (0.134 in.)
2	3.1 mm (0.122 in.)	6	3.5 mm (0.138 in.)
3	3.2 mm (0.126 in.)	7	3.6 mm (0.142 in.)
4	3.3 mm (0.130 in.)	8	-



- (e) Temporarily remove the snap ring, attach the selected flange and restore the snap ring.

NOTICE:

Secure the snap ring so that its gap is visible through the groove of the transaxle case.

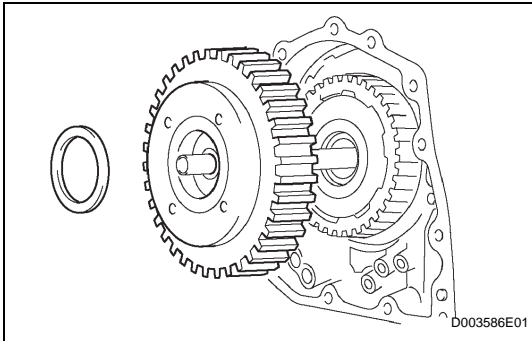


22. INSTALL DIRECT CLUTCH

- (a) Install the bearing race to the direct clutch.

Standard bearing race diameter

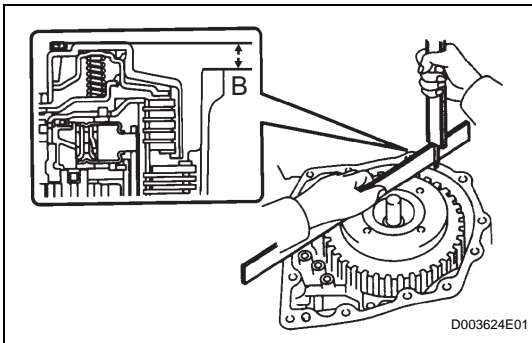
Item	Inside	Outside
Bearing race	30.3 mm (1.193 in.)	46.0 mm (1.811 in.)



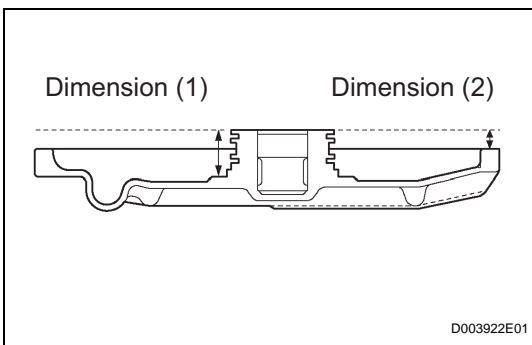
- (b) Install the direct clutch and thrust bearing to the rear planetary sun gear.

NOTICE:

The disc in the direct clutch should completely mate with the hub attached outside the rear planetary sun gear. Otherwise, the rear cover cannot be installed.



- (c) Clean the connector part of the transaxle case and rear cover.
- (d) As shown in the illustration, place a straightedge on the direct clutch drum and measure the distance between the transaxle case and the straightedge using a vernier caliper (Dimension B).



- (e) Measure the 2 places of the rear cover as shown in the illustration. Calculate a dimension C using the following formula.

HINT:

Dimension C = Dimension (1) - Dimension (2)

- (f) Calculate the end play value using the following formula. Select a thrust bearing which satisfies the end play value and install it.

End play:

0.198 to 0.936 mm (0.00780 to 0.03685 in.)

NOTICE:

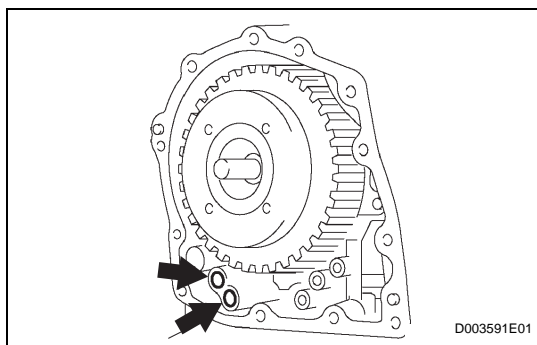
Make sure that the colored race side is facing the direct clutch assembly.

HINT:

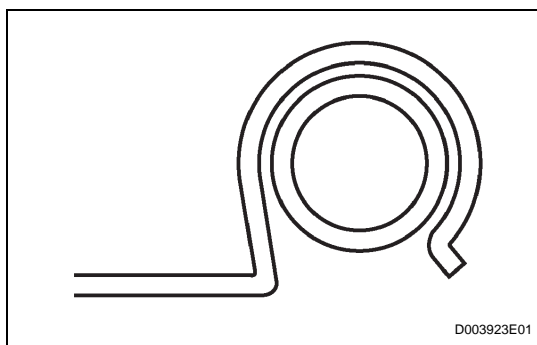
End play = Dimension C - Dimension B

Standard bearing thickness and diameter

Thickness	Inside	Outside
3.58 mm (0.1409 in.)	53.6 mm (2.110 in.)	69.6 mm (2.740 in.)
3.88 mm (0.1528 in.)	53.6 mm (2.110 in.)	70.18 mm (2.768 in.)

**23. INSTALL NO. 1 GOVERNOR APPLY GASKET**

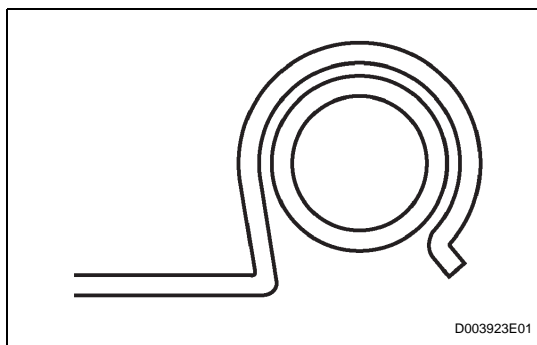
- (a) Install 2 new governor apply gaskets.

**24. INSTALL FRONT CLUTCH APPLY TUBE**

- (a) Install the clamp to the front clutch apply tube.

NOTICE:

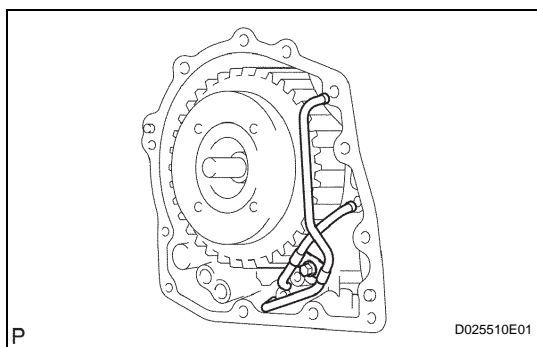
Make sure to install the clamp to the apply pipe before installing the apply pipe to the transaxle case. This prevents the apply pipe from being deformed or damaged.

**25. INSTALL BRAKE APPLY TUBE**

- (a) Install the clamp to the brake apply tube.

NOTICE:

Make sure to install the clamp to the apply pipe before installing the apply pipe to the transaxle case. This prevents the apply pipe from being deformed or damaged.

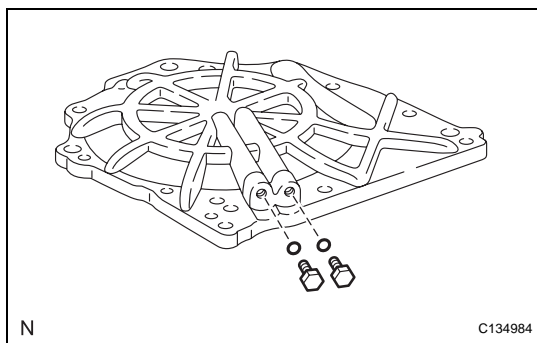


- (b) Install the 2 apply tubes and to the transaxle with the bolt.

Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)

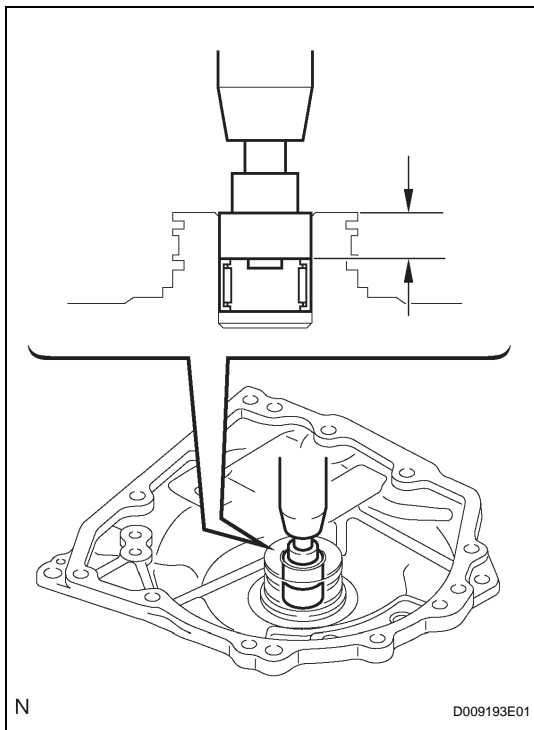
NOTICE:

Each pipe should be securely inserted until it reaches the stopper.

**26. INSTALL NO. 1 TRANSAXLE CASE PLUG**

- (a) Install 2 new O-rings to the 2 plugs.
(b) Install the 2 plugs to the transaxle rear cover.

Torque: 7.4 N*m (75 kgf*cm, 65 in.*lbf)



27. INSTALL TRANSAXLE REAR COVER SUB-ASSEMBLY

- (a) Using SST and a press, press in the bearing.
SST 09950-60010 (09951-00230, 09952-06010)
Standard depth:

12.05 to 12.75 mm (0.4744 to 0.5020 in.)

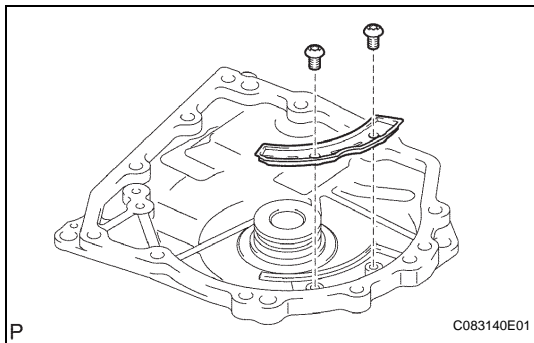
NOTICE:

- Face the inscribed mark side of the bearing race up.
- Repeat the press-fit until the specified value is obtained.

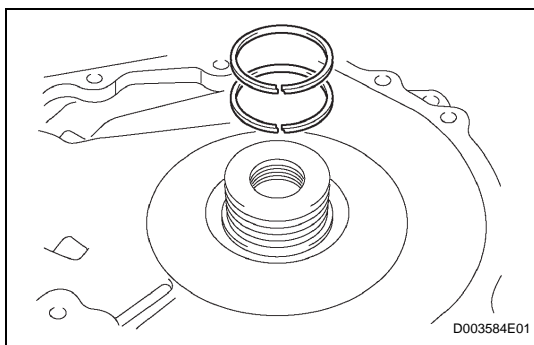
- (b) Apply adhesive to the 2 screws.

Adhesive:

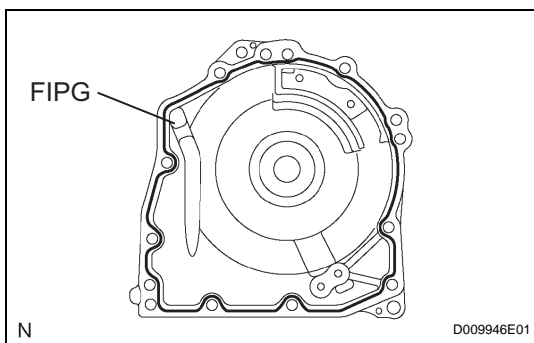
**Toyota Genuine Adhesive 1344,
 Three Bond 1344 or Equivalent**



- (c) Using a T30 "torx" socket wrench, install the transaxle rear cover plate with the 2 screws.
Torque: 7.5 N*m (76 kgf*cm, 66 in.*lbf)



- (d) Coat 2 new oil seal rings with ATF, and install them to the transaxle rear cover.

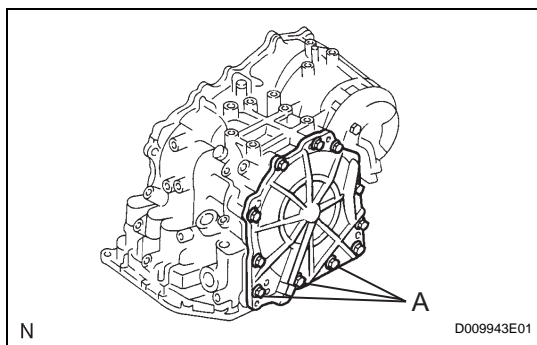


- (e) Remove any packing material and be careful not to get oil on the contacting surfaces of the transaxle rear cover or the transaxle.
 (f) Apply FIPG to the cover.

Seal packing:

**Toyota Genuine Seal Packing 1281,
 Three Bond 1281 or Equivalent**

- (g) Coat the needle roller bearing with ATF.



- (h) Apply adhesive to the threads of the bolts labeled A.

Adhesive:

Toyota Genuine Adhesive 1344,

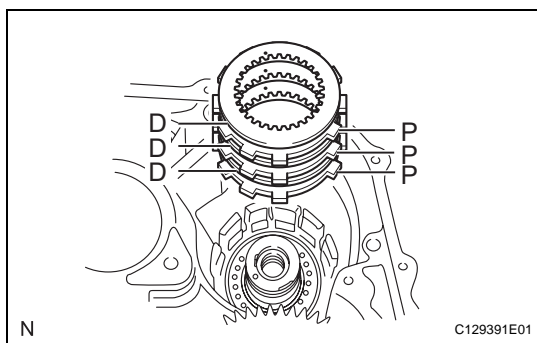
Three Bond 1344 or Equivalent

- (i) Install the 11 bolts.

Torque: 19 N*m (194 kgf*cm, 14 ft.*lbf) for bolt A.

25 N*m (255 kgf*cm, 18 ft.*lbf) for other bolt

SST 09950-60010 (09951-00230, 09952-06010)



28. INSTALL NO. 2 UNDERDRIVE CLUTCH DISC

- (a) Install the 3 discs and 3 plates to the transaxle.

Install in order:

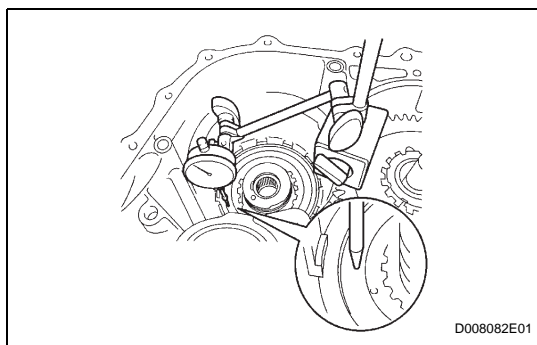
P - D - P - D - P - D

HINT:

D = Disc

P = Plate

- (b) Using a screwdriver, install the snap ring.



- (c) Using a dial indicator, measure the underdrive brake pack clearance while applying and releasing compressed air (392kPa, 4.0 kgf/cm², 57 psi).

Standard pack clearance:

1.59 to 2.20 mm (0.0626 to 0.0866 in.)

HINT:

Select an appropriate flange from the table below so that it will meet the specified value.

Standard flange thickness

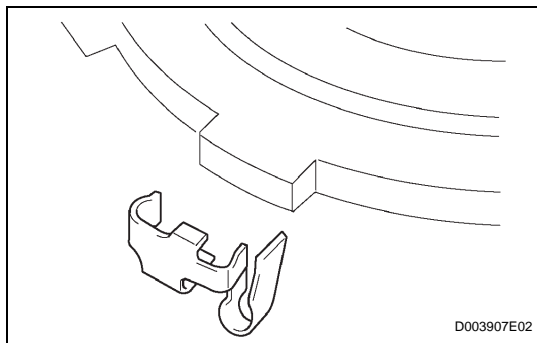
Mark	Thickness	Mark	Thickness
1	3.0 mm (0.118 in.)	3	3.4 mm (0.134 in.)
2	3.2 (0.126 in.)	-	-

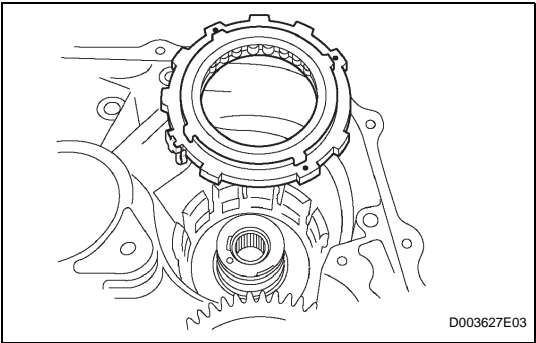
- (d) Temporarily remove the snap ring and attach the flange. Restore the snap ring.

29. INSPECT UNDERDRIVE 1-WAY CLUTCH ASSEMBLY (See page [AX-186](#))

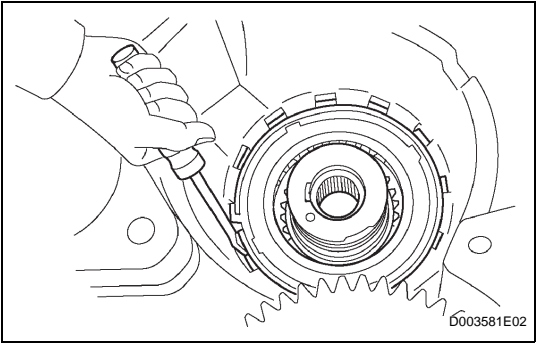
30. INSTALL UNDERDRIVE 1 WAY CLUTCH ASSEMBLY

- (a) Install the outer race retainer to the 1-way clutch.

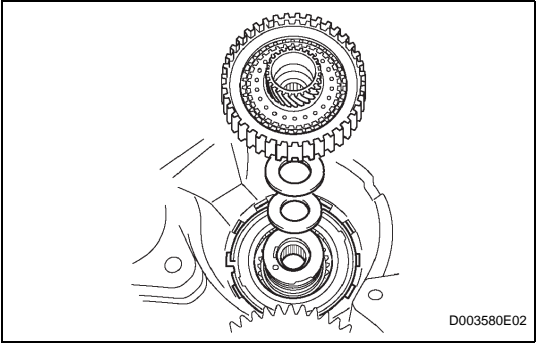




- (b) Install the 1-way clutch to the transaxle.
NOTICE:
Make sure that the mark on the 1-way clutch outer race is visible.



- (c) Using a screwdriver, install the snap ring to the transaxle.

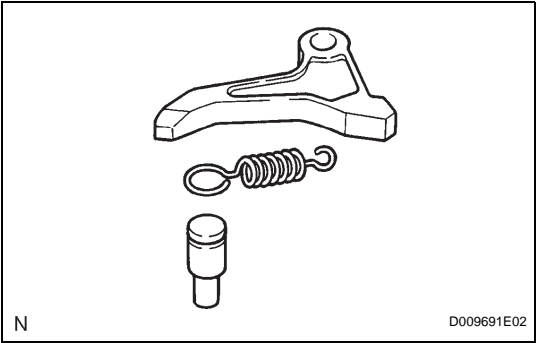


31. INSTALL UNDERDRIVE CLUTCH ASSEMBLY

- (a) Coat the bearing and bearing race with petroleum jelly, and install them onto the underdrive clutch.
Standard race diameter

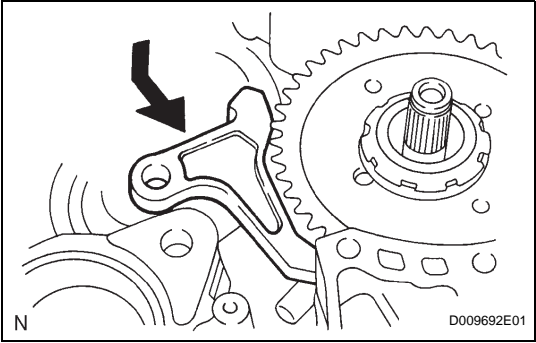
Item	Inside	Outside
Bearing	37.73 mm (1.4854 in.)	58.0 mm (2.283 in.)
Race	29.9 mm (1.177 in.)	55.5 mm (2.185 in.)

- (b) Install the underdrive clutch to the transaxle.

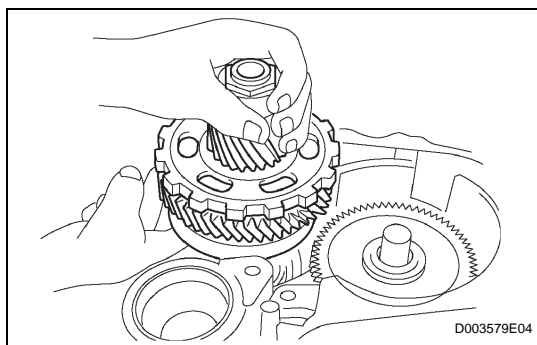


32. INSTALL UNDERDRIVE PLANETARY GEAR

- (a) Install the pawl pin and spring to the parking lock pawl.



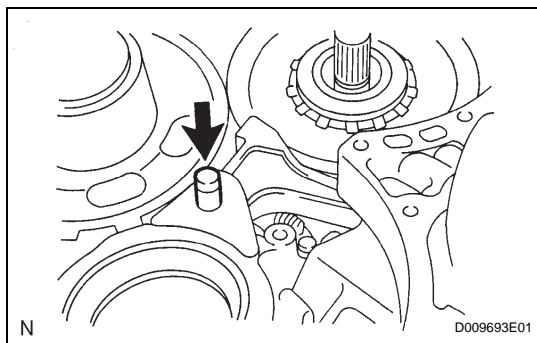
- (b) Temporarily install the parking lock pawl, shaft and spring to the transaxle case as shown in the illustration.



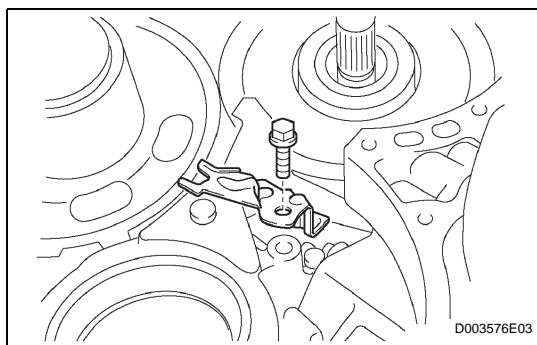
- (c) Install the underdrive planetary gear to the transaxle.

NOTICE:

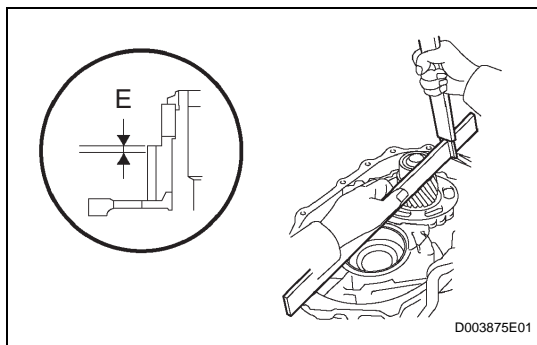
Engage all the discs of underdrive clutch and the hub splines of the underdrive planetary gear firmly and assemble them securely.



- (d) Install the parking lock pawl shaft.



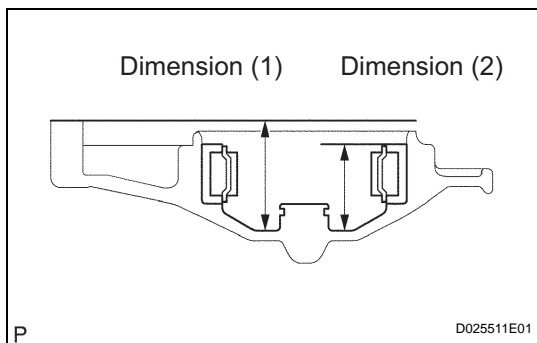
- (e) Install the pawl shaft clamp with the bolt.
Torque: 9.8 N*m (100 kgf*cm, 87 in.*lbf)



- (f) Using a straightedge and vernier calipers as shown in the illustration, measure the gap between the top of the differential drive pinion in the underdrive planetary gear and contact surface of the transaxle and housing (Dimension D).

NOTICE:

Make a note of dimension D as it is necessary for the following process.



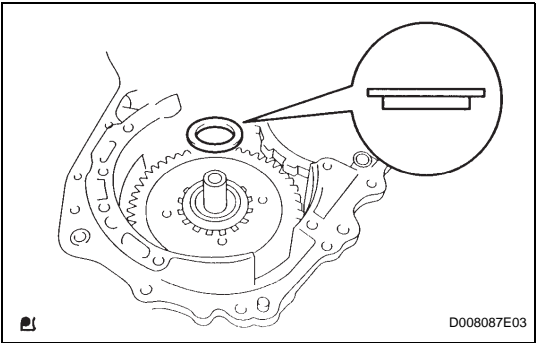
- (g) As shown in the illustration, measure the 2 places of the transaxle housing. Calculate the dimension E using the formula.

NOTICE:

Make a note of dimension E as it is necessary for the following process.

HINT:

Dimension E = Dimension (1) - Dimension (2)

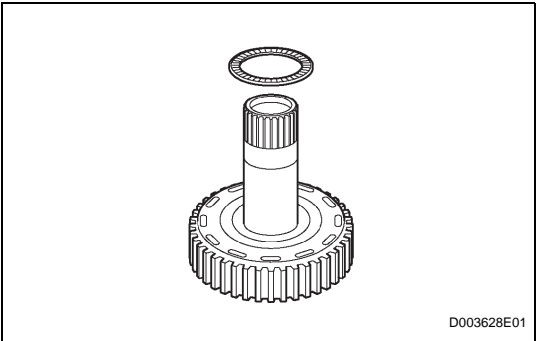


33. INSTALL MULTIPLE DISC CLUTCH HUB

- (a) Install the bearing race to the transaxle while checking its direction.

Standard bearing race diameter

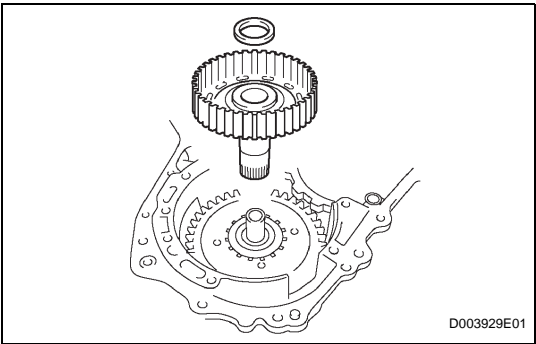
Item	Inside	Outside
Bearing race	34.5 mm (1.358 in.)	48.5 mm (1.909 in.)



- (b) Coat the thrust bearing and race with petroleum jelly, and install them onto the multiple disc clutch hub.

Standard thrust bearing and race diameter

Item	Inside	Outside
Bearing	36.3 mm (1.429 in.)	52.2 mm (2.055 in.)

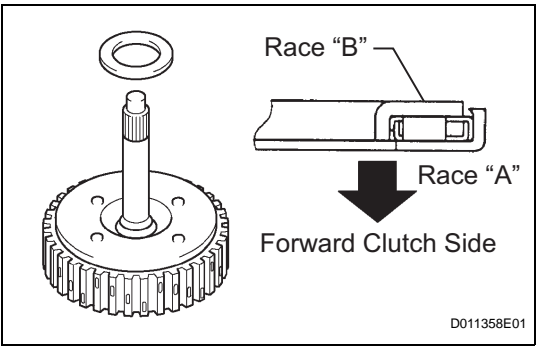


- (c) Install the bearing to the multiple clutch hub.

Standard bearing diameter

Item	Inside	Outside
Bearing	23.5 mm (0.925 in.)	44.0 mm (1.732 in.)

- (d) Install the forward clutch hub to the transaxle.



34. INSTALL FORWARD CLUTCH ASSEMBLY

- (a) Install the thrust bearing to the forward clutch.

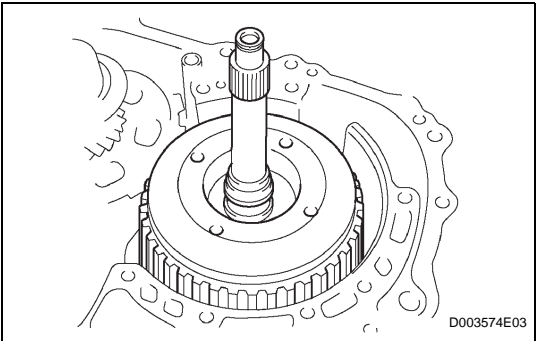
Standard bearing diameter

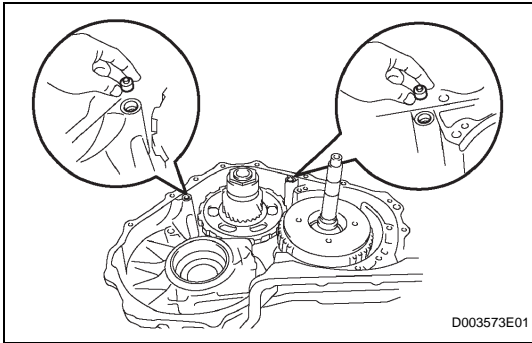
Item	Inside	Outside
Bearing	33.85 mm (1.3327 in.)	52.2 mm (2.055 in.)

NOTICE:
Install the thrust bearing properly so that the race "B" will be visible.

- (b) Install the forward clutch to the multiple clutch hub.

NOTICE:
Align the splines of all discs in the forward clutch with those of multiple clutch hub to assemble them securely.

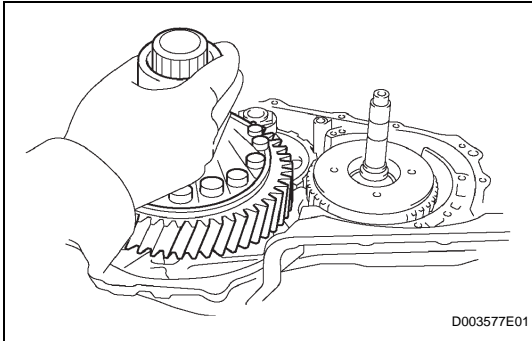




D003573E01

35. INSTALL OVERDRIVE BRAKE GASKET

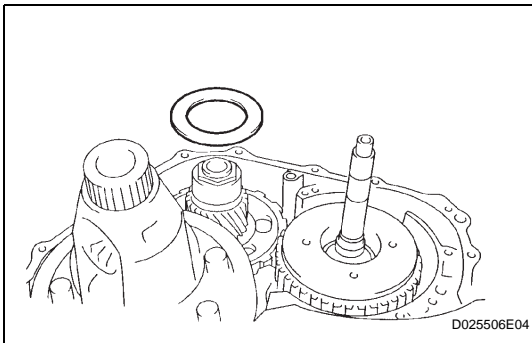
- (a) Install 2 new overdrive brake gaskets.



D003577E01

36. INSTALL DIFFERENTIAL GEAR ASSEMBLY

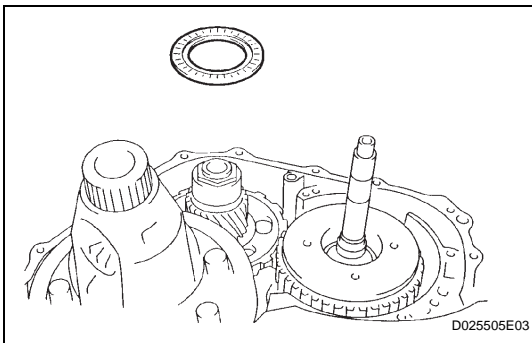
- (a) Install the differential gear to the transaxle.



D025506E04

37. INSTALL NO. 2 THRUST BEARING UNDERDRIVE RACE

- (a) Install the thrust bearing race to the underdrive planetary gear.



D025505E03

38. INSTALL THRUST NEEDLE ROLLER BEARING

- (a) Calculate the end play value using the following formula and values of Dimensions D and E that were measured when installing cylindrical roller bearing and underdrive planetary gear. Select an appropriate underdrive planetary gear thrust bearing race No. 2 which satisfies the specified end play value, and instal it.

End play:

0.498 to 0.993 mm (0.0196 to 0.0390 in.)

HINT:

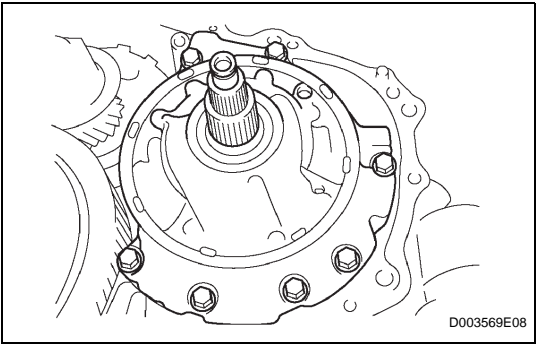
End play = Dimension E - Dimension D - thrust bearing thickness 3.28mm (0.1291 in.) - underdrive thrust bearing race thickness.

Standard race thickness

E - D	Thickness
Less than 7.64 mm (0.3008 in.)	3.5 mm (0.138 in.)
7.64 mm (0.3008 in.)	3.8 mm (0.150 in.)

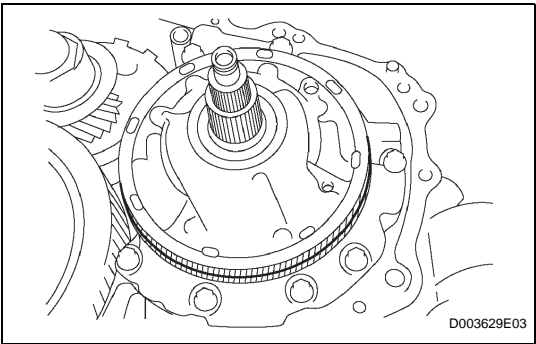
Standard bearing and bearing race diameter

Item	Inside	Outside
Bearing	57.2 mm (2.252 in.)	84.96 mm (3.3449 in.)
Bearing race	56.4 mm (2.220 in.)	83.0mm (3.268 in.)

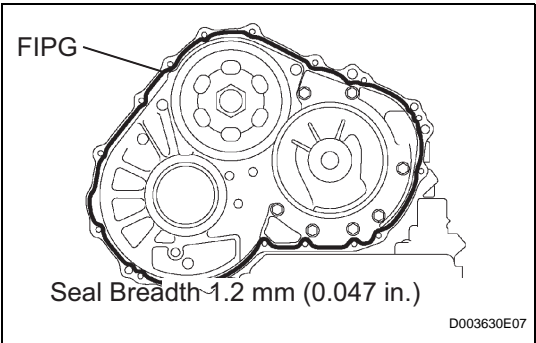


39. INSTALL OIL PUMP ASSEMBLY

- (a) Install the oil pump to the transaxle with the 7 bolts.
Torque: 22 N*m (224 kgf*cm, 16 ft.*lbf)



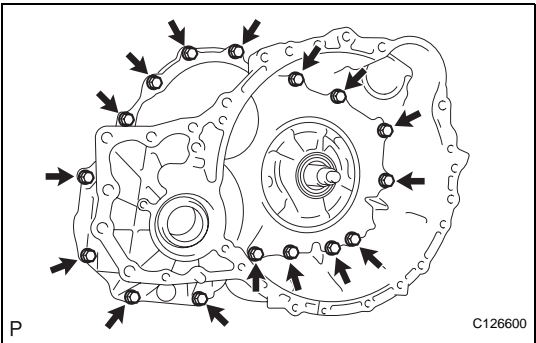
- (b) Coat the O-ring of the oil pump with ATF.



40. INSTALL TRANSAXLE HOUSING

- (a) Remove any packing material and be careful not to get oil on the contacting surface of the transaxle housing.
- (b) Apply FIPG to the transaxle.

Seal packing:
Toyota Genuine Seal Packing 1281,
Three Bond 1281 or Equivalent



- (c) Install the transaxle housing to the transaxle with the 16 bolts.
Torque: 22 N*m (224 kgf*cm, 16 ft.*lbf) for bolt A
29 N*m (296 kgf*cm, 21 ft.*lbf) for bolt B and C

HINT:
Each bolt length is indicated below.

Bolt length:
50 mm (1.969 in.) for bolt A
50 mm (1.969 in.) for bolt B
42 mm (1.654 in.) for bolt C

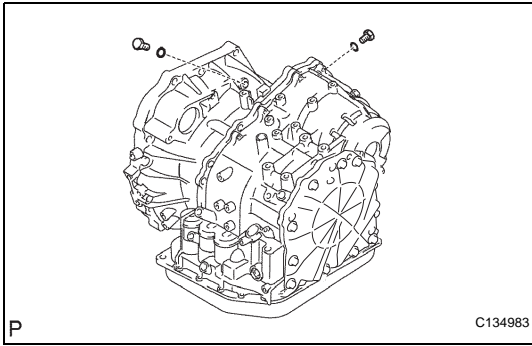
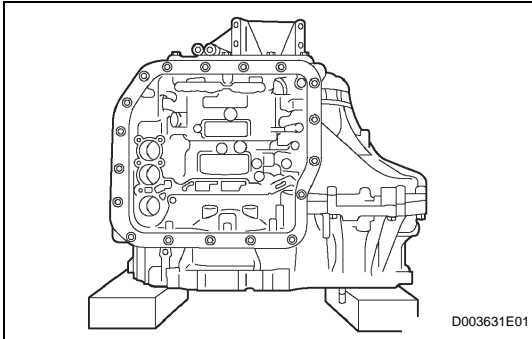
NOTICE:
Because the bolt labeled A are seal bolts, apply seal packing to new bolts and tighten them within 10 minutes after application.

Seal packing:
Toyota Genuine Seal Packing 1281,

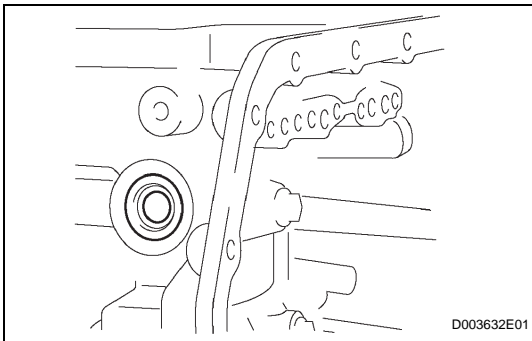
Three Bond 1281 or Equivalent**41. INSTALL NO. 1 TRANSAXLE CASE PLUG**

- (a) Install 2 new O-rings to the 2 plugs.
- (b) Install the 2 plugs to the transaxle housing.

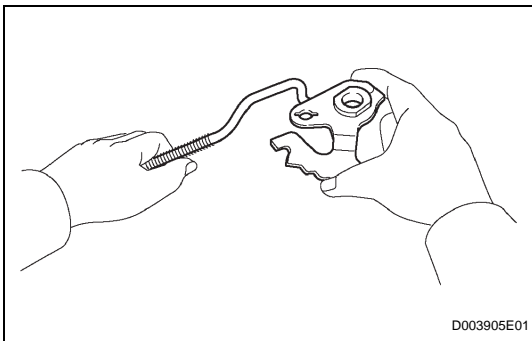
Torque: 7.4 N*m (75 kgf*cm, 65 in.*lbf)

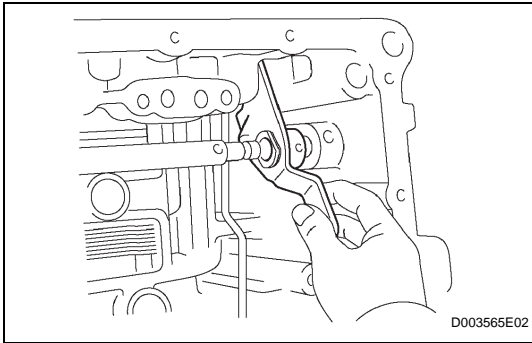
42. INSPECT INPUT SHAFT END PLAY (See page [AX-184](#))**43. FIX AUTOMATIC TRANSAXLE ASSEMBLY****44. INSTALL MANUAL VALVE LEVER SHAFT OIL SEAL**

- (a) Coat a new oil seal with ATF.
- (b) Install the oil seal to the transaxle.

**45. INSTALL PARKING LOCK ROD SUB-ASSEMBLY**

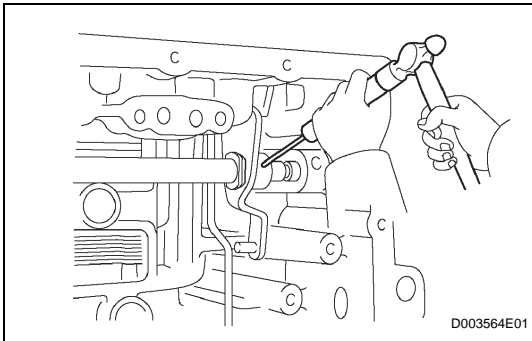
- (a) Install the parking lock rod to the manual valve lever.



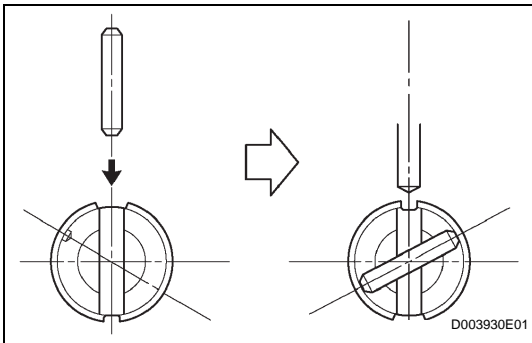


46. INSTALL MANUAL VALVE LEVER SUB-ASSEMBLY

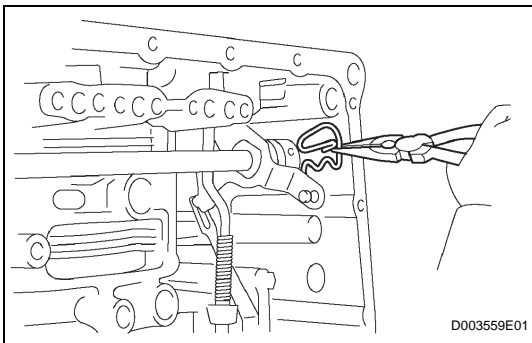
- (a) Install a new spacer and manual valve lever shaft to the transaxle.



- (b) Using a pin punch and hammer, tap in a new pin.

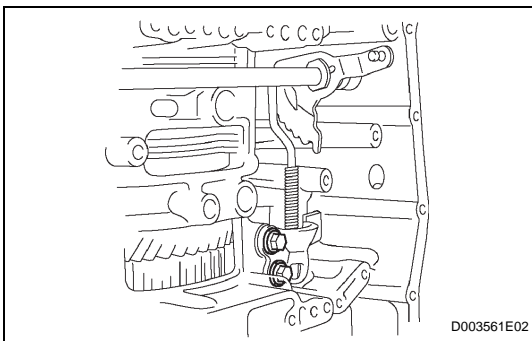


- (c) Turn the spacer and lever shaft to align the small hole for locating the staking position mark on the lever shaft.
 (d) Using a pin punch, stake the spacer through the small hole.
 (e) Check that the spacer does not turn.



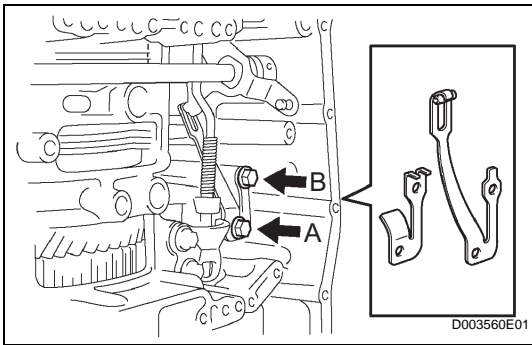
47. INSTALL MANUAL VALVE LEVER SHAFT RETAINER SPRING

- (a) Using needle-nose pliers, install the retainer spring.



48. INSTALL PARKING LOCK PAWL BRACKET

- (a) Install the parking lock pawl bracket with the 2 bolts.
Torque: 20 N*m (205 kgf*cm, 15 ft.*lbf)
Bolt length:
25 mm (0.984 in.)



49. INSTALL MANUAL DETENT SPRING SUB-ASSEMBLY

- (a) Install the manual detent spring with the 2 bolts.

NOTICE:

Make sure to install the manual detent spring and cover in this order.

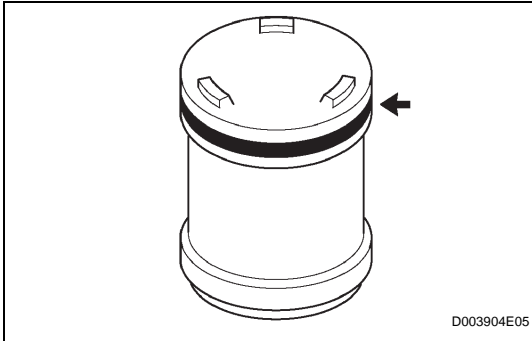
**Torque: 20 N*m (204 kgf*cm, 16 ft.*lbf) for bolt A
12 N*m (122 kgf*cm, 9 ft.*lbf) for bolt B**

HINT:

Each bolt length is indicated below.

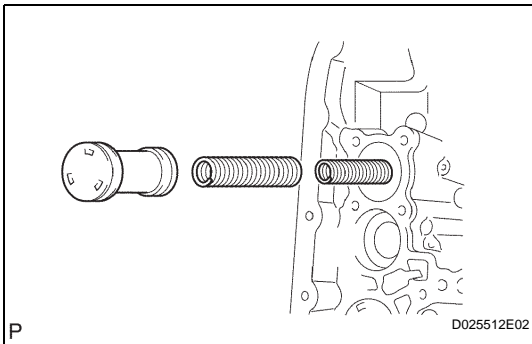
27 mm (1.063 in.) for bolt A

16 mm (0.630 in.) for bolt B



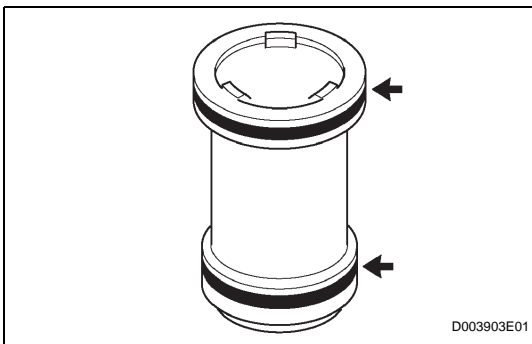
50. INSTALL B-3 ACCUMULATOR PISTON

- (a) Coat a new O-ring with ATF, and install it to the B-3 accumulator piston.



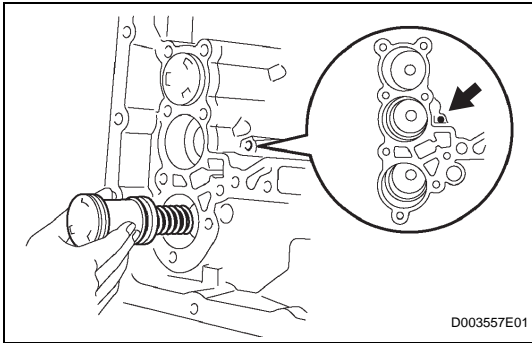
- (b) Coat the piston with ATF, install it to the transaxle.
Standard accumulator spring

Spring	Free length Outer diameter	Color
B-3 Inner	60.24 mm (2.3716 in.) 15.9 (0.626 in.)	Yellowish green
B-3 Outer	74.61 mm (2.9374 in.) 21.7 mm (0.854 in.)	Blue



51. INSTALL C-1 ACCUMULATOR PISTON

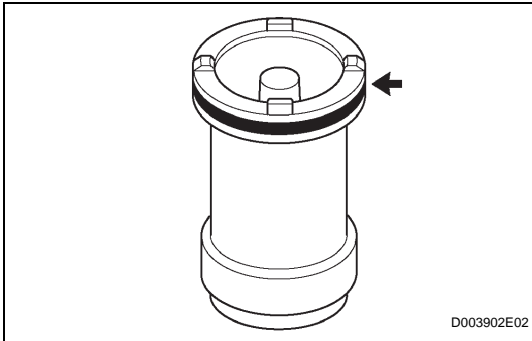
- (a) Coat 2 new O-rings with ATF, and install them to the C-1 accumulator piston.



- (b) Coat the piston with ATF, and install it to the transaxle.

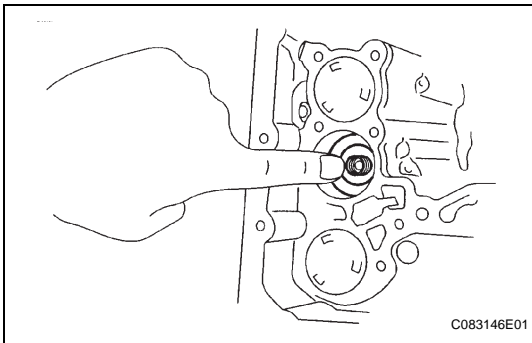
Standard accumulator spring

Spring	Free length Outer diameter	Color
C-1	81.53 mm (3.2098 in.) 18.5 mm (0.728 in.)	Pink



52. INSTALL C-3 ACCUMULATOR PISTON

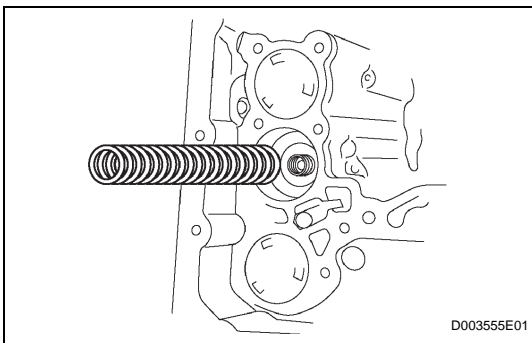
- (a) Coat a new O-ring with ATF, and install it to the C-3 accumulator piston.



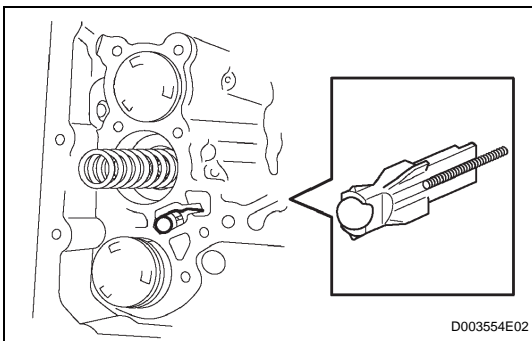
- (b) Coat the piston with ATF, install it to the transaxle case.

Standard accumulator spring

Spring	Free length Outer diameter	Color
C - 3	90.49 mm (3.5626 in.) 19.2 mm (0.756 in.)	White

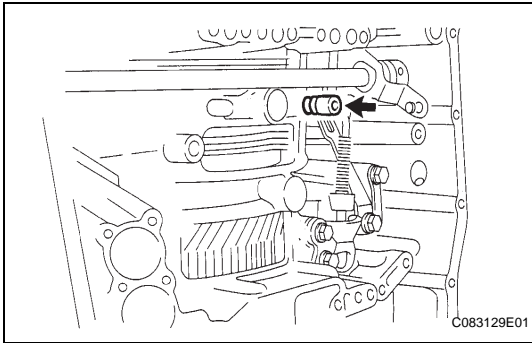


- (c) Install the spring from the C-3 accumulator piston.

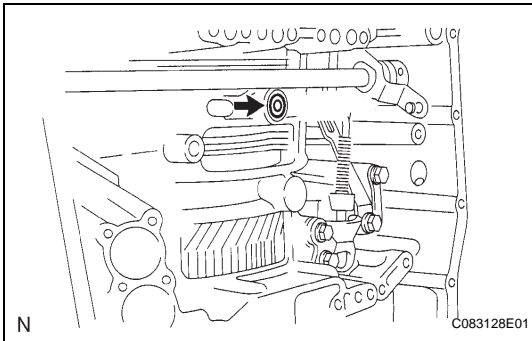


53. INSTALL CHECK BALL BODY

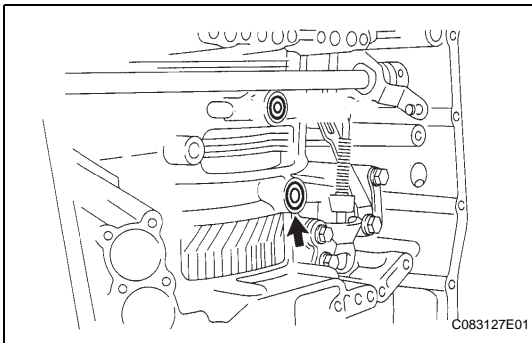
- (a) Install the check ball body and spring.

**54. INSTALL BRAKE DRUM GASKET**

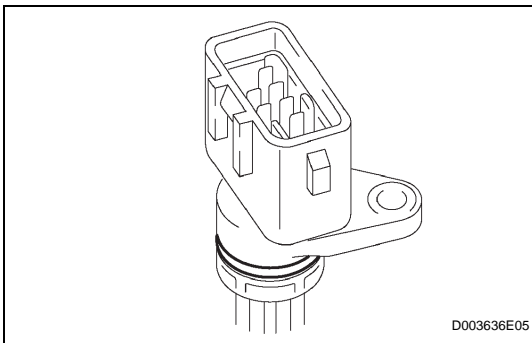
- (a) Coat a new brake drum gasket with ATF, and install it to the transaxle.

**55. INSTALL TRANSAXLE CASE 2ND BRAKE GASKET**

- (a) Coat a new transaxle case 2nd brake gasket with ATF, and install it to the transaxle.

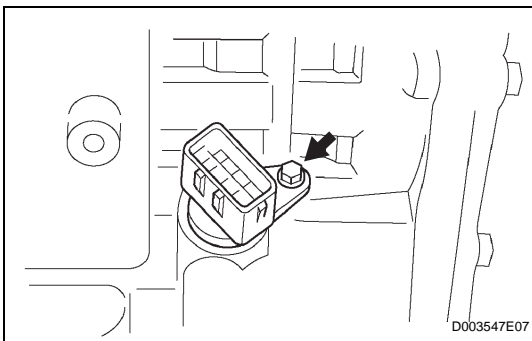
**56. INSTALL NO. 1 GOVERNOR APPLY GASKET**

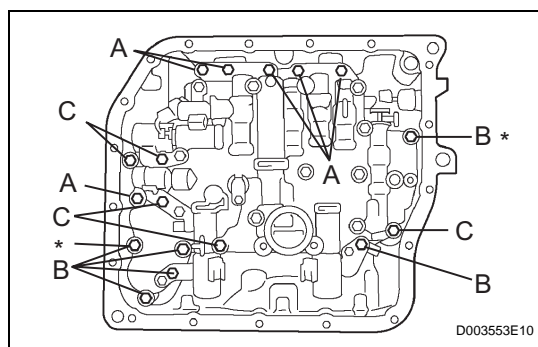
- (a) Coat a new governor apply gasket No. 1 with ATF, and install it to the transaxle.

**57. INSTALL TRANSMISSION WIRE**

- (a) Coat a new O-ring with ATF, and install it to the transaxle solenoid wire.

- (b) Install the solenoid wire retaining bolt
Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)



**58. INSTALL TRANSMISSION VALVE BODY ASSEMBLY**

(a) Align the groove of the manual valve with the pin of lever.

(b) Install the 17 bolts.

Torque: 11 N*m (112 kgf*cm, 8 ft.*lbf)

NOTICE:

- Push the valve body against the accumulator piston spring and the check ball body to install it.
- Tighten the bolts marked by * in the illustration first temporarily because they are positioning bolts.

HINT:

Each bolt length is indicated below.

Bolt length:

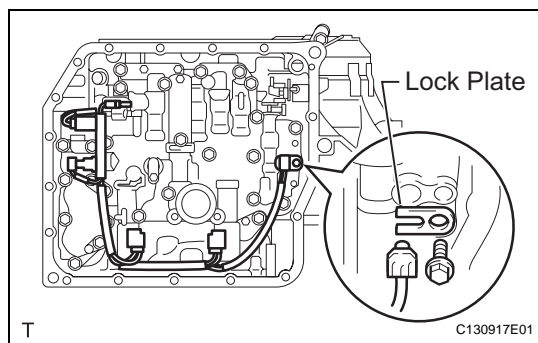
25 mm (0.984 in.) for bolt A

41 mm (1.614 in.) for bolt B

45 mm (1.771 in.) for bolt C

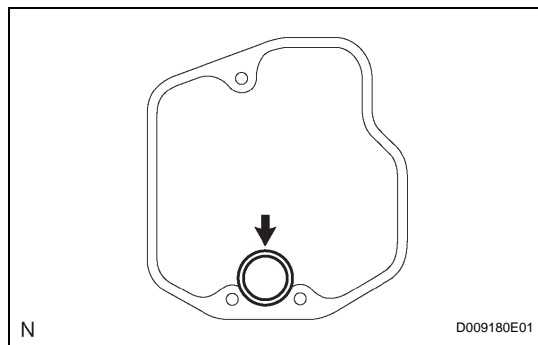
- (c) Connect the 5 solenoid connectors.
- (d) Coat the O-ring of the temperature sensor with ATF.
- (e) Install the ATF temperature sensor with the lock plate and bolt.

Torque: 6.6 N*m (67 kgf*cm, 58 in.*lbf)

**59. INSTALL VALVE BODY OIL STRAINER ASSEMBLY**

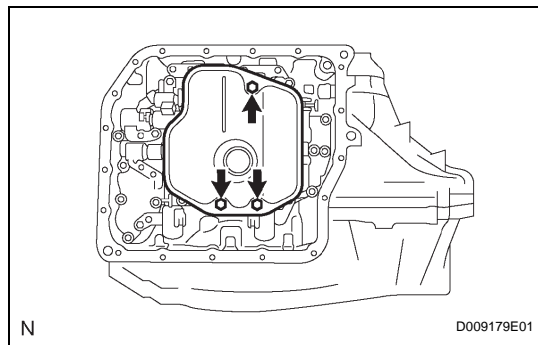
(a) Coat a new O-ring with ATF.

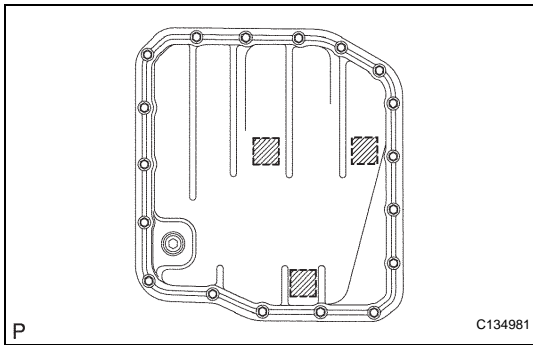
(b) Install the O-ring to the oil strainer.



(c) Install the oil strainer with the 3 bolts.

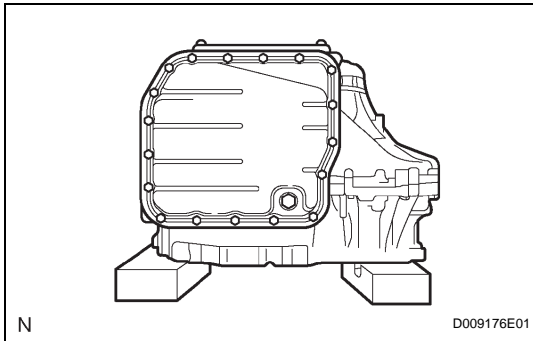
Torque: 11 N*m (112 kgf*cm, 8 ft.*lbf)





60. INSTALL AUTOMATIC TRANSAXLE OIL PAN SUB-ASSEMBLY

- Install the 3 magnets in the oil pan.
- Install a new oil pan gasket to the oil pan.

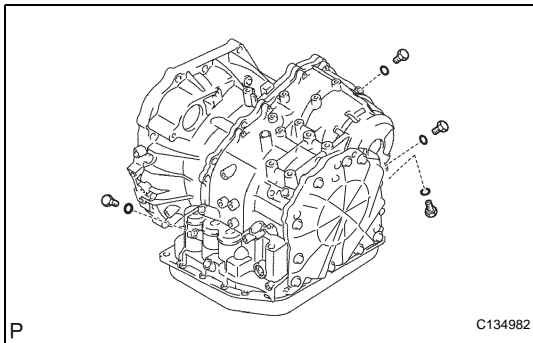


- Install the oil pan to the transaxle with the 18 bolts.

Torque: 7.6 N*m (77 kgf*cm, 67 in.*lbf)

NOTICE:

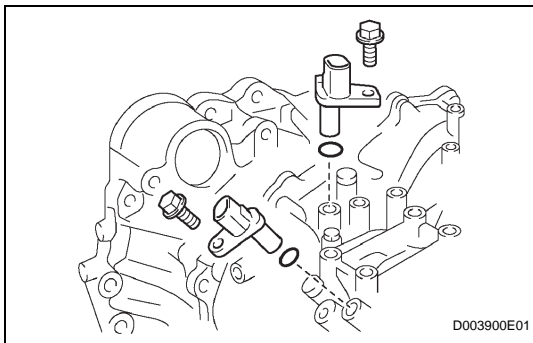
Because the bolts are seal bolts, apply seal packing to new bolts and tighten them within 10 minutes after application.



61. INSTALL NO. 1 TRANSAXLE CASE PLUG

- Coat 4 new O-rings with ATF, and install them to the 4 plugs.
- Install the 4 plugs to the transaxle case.

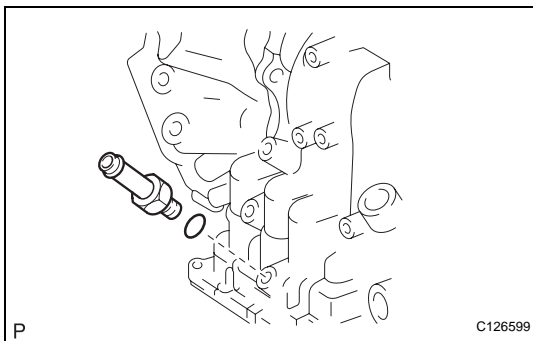
Torque: 7.4 N*m (75 kgf*cm, 65 in.*lbf)



62. INSTALL SPEED SENSOR

- Coat 2 new O-rings with ATF, and install them to the 2 sensors.
- Install the 2 sensors with the 2 bolts.

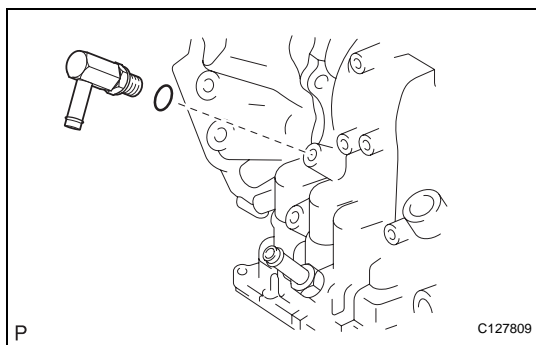
Torque: 11 N*m (112 kgf*cm, 8 ft.*lbf)



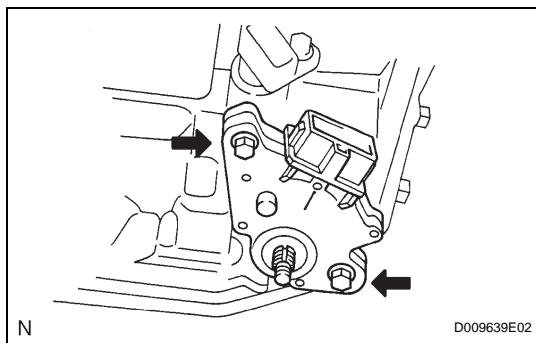
63. INSTALL OIL COOLER INLET TUBE UNION

- Coat a new O-ring with ATF, and install it to the union.
- Install the union to the transaxle.

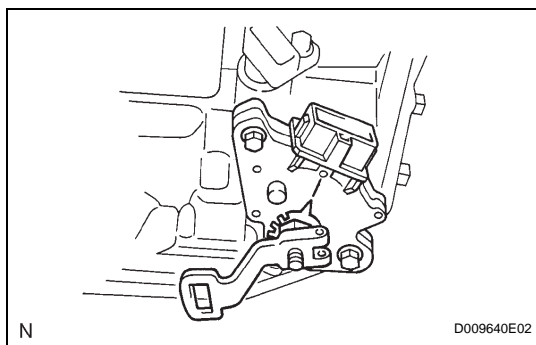
Torque: 27 N*m (276 kgf*cm, 20 ft.*lbf)

**64. INSTALL OIL COOLER OUTLET TUBE UNION**

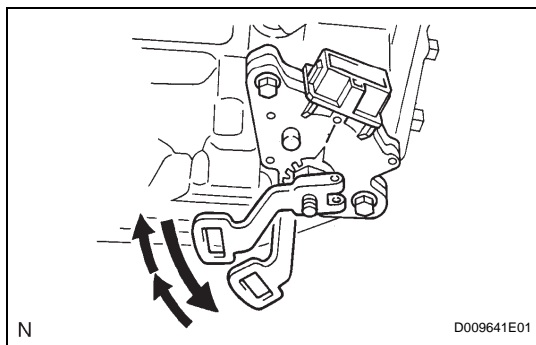
- (a) Coat a new O-ring with ATF, and install it to the union.
 - (b) Install the union to the transaxle.
- Torque: 25 N*m (255 kgf*cm, 18 ft.*lbf)**

65. INSTALL BREATHER PLUG HOSE**66. INSTALL PARK/NEUTRAL POSITION SWITCH ASSEMBLY**

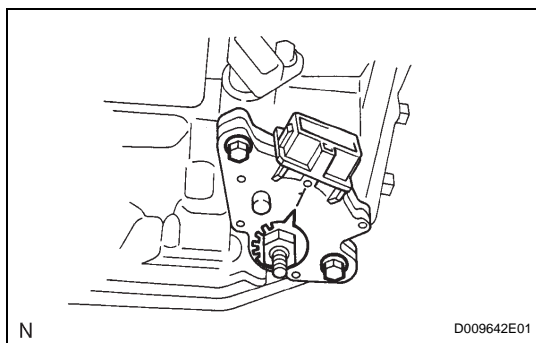
- (a) Install the park/neutral position switch to the manual valve shaft.
 - (b) Temporarily install the 2 bolts.
 - (c) Install a new lock plate and tighten the manual valve shaft nut.
- Torque: 5.4 N*m (55 kgf*cm, 48 in.*lbf)**



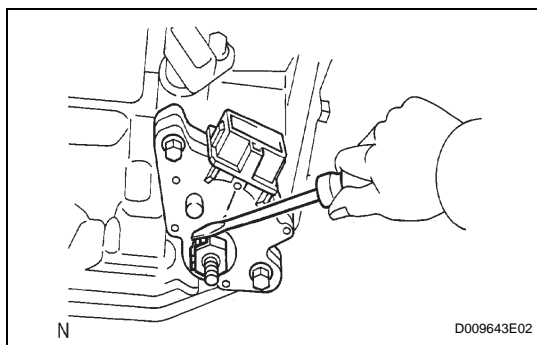
- (d) Temporarily install the control shaft lever.



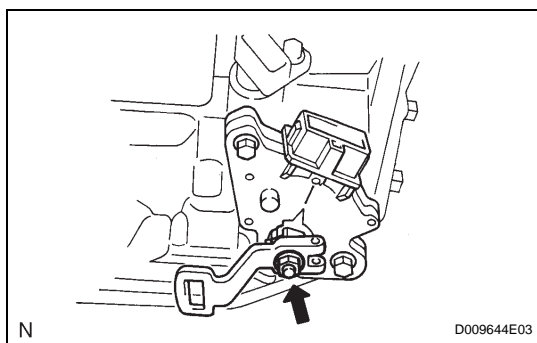
- (e) Turn the lever counterclockwise until it stops, and then turn it clockwise 2 notches.
- (f) Remove the control shaft lever.



- (g) Align the groove with neutral basic line.
 - (h) Hold the switch in this position and tighten the 2 bolts.
- Torque: 6.9 N*m (70 kgf*cm, 61 in.*lbf)**



- (i) Using a screwdriver, stake the nut with the lock plate.



- (j) Install the control shaft lever with the washer and nut.

Torque: 13 N*m (133 kgf*cm, 10 ft.*lbf)